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Dance/Movement Therapy and the Journey of Infertility: A Phenomenological Study

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Dance/Movement Therapy and the Journey of Infertility:

A Phenomenological Study

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in partial fulfillment of the requirements for

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in

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Abstract

The purpose of this phenomenological study is to understand the holistic phenomenon of infertility in order to assess the basic needs of women who struggle with infertility and the associated medical treatments. In order to address a comprehensive understanding of the experience of infertility, this study employed a body-mind perspective, which is based on the dance/movement therapy (DMT) principle that “the body and the mind are inseparable” (Levy, 2005, p. 1). Five women, who had experience with infertility, were invited to the study, and each participated in individual verbal and movement interviews. Kvale’s interview analysis (Kvale & Brinkman, 2009) was utilized to analyze verbal data, and the researcher’s kinesthetic empathy elicited by embodiment was employed to understand movement data. Finally, verbal and movement data were synthesized through the choreographic process, and a dance piece was performed as a public presentation of findings. The researcher discovered that infertile women experience the process of disconnection from self and body, which might have been manifested through a body-mind split. Infertile women’s needs included sharing their experiences with others who had similar experiences and reconnecting to self and others. Based on identified needs, potential DMT interventions that can be used for this population are discussed.

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Chapter I: Introduction

As a child, my biggest life dream was always becoming a mother. I loved interacting with babies and younger children, and it always made my heart tender and warm when I was with them. These past few years, as I approached my thirties and witnessed many of my friends starting to develop their families, I started to ask myself a question: “Am I ever going to become a mother?” I started to anticipate a possible struggle with pregnancy because there is a history of gynecological issues in my family. This ultimately made me curious about the phenomenon of women’s infertility and its treatment process. Meanwhile, in the process of becoming a dance/movement therapist, I learned that dance/movement therapy (DMT) is a type of psychotherapy which uses movement as a therapeutic tool and puts emphasis on the connection between body and mind (Levy, 2005). Since I have experience with a psychological and physical struggle related to my own gynecological condition, I could not help wondering about not only this phenomenon for others, but also the potential positive contributions of DMT for this particular population.

Infertility is considered as a medical condition that is “defined by the failure to achieve a successful pregnancy” (American Society for Reproductive Medicine [ASRM], 2013, para.1). Diagnostic criteria include inability to conceive after about 12 months of unprotected intercourse and/or the inability to carry a pregnancy to delivery (ASRM, 2013). In addition to this biological understanding of infertility, many studies have found that women who experience infertility are at a higher risk of experiencing emotional distress (Berger, Paul & Henshaw, 2013; Greil, McQuillan, Lowry & Shreffler, 2011; Kirca & Pasinlioglu, 2013; Klemetti, Reitanen, Sihvo, Saarni & Koponene, 2010; Lee. S, Wang, Kuo. C, Kuo. P, Lee. M, 2010; Lykeridou, Gourounti,

Deltsidou, Loutradies & Vaslamatzis, 2009). Considering both the biological symptoms and psychological stressors that infertility causes, it seemed to be very clear to me that women who struggle with infertility may benefit from having body-mind integrated support, which addresses both their physical and psychological needs.

In the medical DMT field, Goodill (2005) identified the body-mind integration, as “the interaction and integration between aspects of human functioning typically considered of the mind and those typically considered of the body” (Goodill, 2005, p. 22). DMT has the potential to work with both the human’s body functions and its mind functions; therefore, DMT has been utilized in the medical field to nurture the body-mind integration and support holistic well-being for those who receiving medical treatments (Goodill, 2005). Yet, there is limited research regarding DMT and women who struggle with infertility. Thus, I came to believe in the worth of exploring the potential benefits of DMT with this population to fulfill my curiosity as well as to expand the field of medical DMT.

As I researched and talked to people who are familiar with fertility treatments, I came to find that many women’s emotional needs and physical needs were often treated separately rather than in an integrated manner. Along with medical treatments, some clinics offer counseling services. However, many of them only provide two to three sessions. In many cases, it seems like medical treatments are provided as a standalone process. Thus, some women may have to seek support outside of their medical treatment process. Yet, the majority of support groups in the Chicago area are often led by peers rather than therapists who have the knowledge and skills to facilitate proper interventions. Although existing studies suggest the benefits of psychotherapy for this population (Faramarzi, Pasha, Esmailzadeh, Kheirkhah, Heidary, & Afshar. 2013; Koszycki, Bisserbe, Biller, Bradwejn, & Markowitz, 2012; Mosalanejad & Koolee, 2011;

Ramezanzadeh, Noorbala, Abedinia, Forooshani & Naghizadeh, 2010), there seem to be only a few options for women to gain emotional support in the process of infertility. This current status around infertility made me want to offer a bridge between those women's emotional and physical needs, which tend to be treated separately, and to expand options of support for women experiencing infertility.

One of the contributing factors of this lack of support and research seems to be the culture of secrecy and shame that comes with infertility for many women. In current American society, reproduction is considered as a private matter (Michie & Cahn, 1997). Many women who go through fertility treatment often feel annoyed or embarrassed to talk about their experiences (Kirca & Pasinlioglu, 2013) because their reproductive processes are enhanced in unnatural ways (Michie & Cahn, 1997).

In order to satisfy my curiosity, I originally wanted to provide DMT sessions to those women who experience infertility and examine the benefits. However, I realized that I needed to gain a better understanding of their experiences to be able to develop a hypothetical therapy session. Therefore, I decided to step back and learn about their experiences of infertility and assess their needs, which ultimately may help with the development of DMT techniques and intervention ideas for future use with women with infertility.

Purpose of the research.

The purpose of this study was to gain body-mind integrated understanding of the phenomenon of infertility in order to assess basic needs of women who struggle with infertility and its medical treatment process. The potential benefits of DMT were explored once these needs were identified. Currently, limited literature exists that provides a comprehensive view on this phenomenon of infertility. By conducting a needs assessment through a DMT lens, which

emphasizes the body-mind connection, I hope to create a bridge between the understanding of the psychological and physical/kinesthetic experience of infertility.

Through this research, I hoped to find the answers for the following questions: What are women's experiences of infertility and their medical treatment processes? Through a body-mind integrated view, what are the basic needs of this population? It is my intention to introduce DMT interventions, which may be helpful for this population as a part of the conclusion; however, the scope of this study does not allow for an investigation into the effectiveness of the DMT interventions with women with infertility.

Theoretical Approach

To be able to explore and gain a comprehensive view of the phenomenon of infertility, this study was designed as a collaboration of a phenomenological approach and the body-mind perspective. Phenomenology is widely used in studies of human behaviors and experiences, seeking descriptions of a targeted phenomenon (Moustakas, 1994). In this theoretical framework, a phenomenon refers to an observable and lived human experience, such as medical illnesses, specific emotions, or exclusion and discrimination (Croswell, Hanson, Plano & Moralesy, 2007). Traditionally, phenomenological studies were conducted through interviews and conversations (Moustakas, 1994). Yet, I felt using only a conversation-based approach was not enough to gain a fully integrated understanding of the experience of infertility because it lacks the ability to address physical or kinesthetic aspects. Therefore, I decided to utilize a body-mind perspective in this study through creative body based techniques, such as embodiment and choreography.

Phenomenological approach. I was drawn to the phenomenological approach due to its ability to find commonality in people's experiences and describe universal essences within the phenomenon (Moustakas, 1994). In order to conduct a needs assessment and come up with

possible interventions that I could introduce to the fertility community in the future, it was very important for me to have a broad understanding of infertility experiences. I believed a phenomenological approach could challenge me to see “the wholeness of experience rather than solely ... objects or parts” (Moustakas, 1994, p. 21). In order to achieve a comprehensive view of infertility, grasping the wholeness of this phenomenon is essential.

Body-mind perspective. To seek a comprehensive understanding of the experience of infertility, I invited a body-mind perspective based on a DMT principle that “the body and the mind are inseparable” (Levy, 2005. p1). In the DMT field, the human body and mind are believed to have reciprocal or bidirectional influence on each other; thus, change in the body can cause change in the mind, and vice versa (Goodill, 2005; Levy, 2005). This unique integration and interaction between body and mind are often referred to as the body-mind connection. Within the body-mind perspective, body represents “functions of the body [that] encompass physiologic, kinesio logic, neurologic, hormonal and immunologic [systems]” (Goodill, 2005). Similarly, mind represents “thinking, communication, intentional behavior, beliefs, relationships, social processes, and expression of emotions” (Goodill, 2005). This body-mind integrated approach allowed me to perceive individuals as a whole, rather than a sum of parts (Goodill, 2005). I believed this approach brings a fuller understanding of the experience as well as the needs of women with infertility.

Value of the Study

Through this study, I wished to provide a body-mind integrated understanding of this phenomenon and contribute to expanding the DMT professional field. The phenomenon of infertility is a medical condition which elicits psychological struggles, and many current studies suggest a need for infertile women’s emotional support (Berger et al., 2013; Greil et al., 2011;

Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lykeridou et al., 2009). Connecting DMT and women with infertility may expand the populations and/or environments where dance/movement therapists can provide services. Not only do I hope for this study to contribute to expanding the DMT field, I believe looking at this phenomenon through the body-mind perspective will provide a more integrated understanding about infertility.

In addition, by conducting a needs assessment, I hoped to give participants a voice as representatives of this population, particularly given the culture of secrecy. Also, understanding this phenomenon could fulfill my personal anticipatory concern around my body condition. Furthermore, I hoped that the DMT techniques I propose will contribute to the expansion of treatment options and integration of psychological support with medical treatment.

Chapter II: Literature Review

Currently, the phenomenon of infertility is recognized as a medical condition, and current research mainly focuses on understanding psychosocial aspects of women's infertility experiences. The research shows that this population may face not only layers of emotional struggles, such as anxiety, sense of loss, grief, and hopelessness, but also faces social stigma which leads them into isolation (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lee, et al., 2010; Lykeridou et al., 2009). Both psychological and social struggles intertwine and may make infertility experiences more complicated and impactful. Therefore, the need for psychotherapy is expressed in many studies (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lykeridou et al., 2009).

Meanwhile, DMT has been utilized in both the medical and psychological fields in order to provide bio-psychosocial support (Goodill, 2005). The body-mind integrated approach, which is an important concept of DMT, has been used to provide support in medical situations, such as cancer, HIV, and major surgery, and it contributes to providing holistic treatments in the medical field (Goodill, 2005). Medical DMT is utilized to foster improvement in vitality, coping skills, self-efficiency, body image of illness, and mood in individuals with medical illnesses (Goodill, 2005). Similar to those above examples, infertility requires medical treatments, which may cause psychological pain as well as physical discomfort (Berger et al., 2013). Thus, application of DMT to the infertile population can be suggested. However, few researchers address the use of DMT with this population.

This literature review focuses on a general overview of infertility and existing studies about infertility's psychosocial impacts and the efficacy of psychotherapy. Also, current studies about DMT in the medical field are reviewed. I specifically focused on reviewing use of DMT

with cases of women with breast cancer and gynecological cancer. I made this decision because these specific medical conditions often lead emotional, sexual, and relationship problems, which may also be experienced by infertile women (Berger et al., 2013; Goodill 2009; Greil et al 2011; Kirca & Pasinlioglu, 2013; Klemetti et al, 2010; Lee. S, et al, 2010; Lykeridou et al., 2009). In addition, a recent study that addressed the possible benefits of DMT on infertile couples is included.

Infertility

Definition and causes. According to the American Society for Reproductive Medicine (ASRM, 2013), infertility is defined as “the failure to achieve a successful pregnancy” (para. 1). A diagnosis of infertility requires inability to conceive after about 12 months of unprotected intercourse (ASRN, 2013). Women who are older than 35 years old may be considered as infertile if they are not able to conceive after six month of trying. Another aspect of an infertility diagnosis is the inability to carry a pregnancy to delivery; two or more recurrent miscarriages can lead the diagnosis of infertility (ASRN, 2013; Centers for Disease Control and Prevention [CDC], 2013).

Worldwide, close to 50 million couples are currently facing infertility problems (Chandra, Martinez, Mosher, Abma & Jones 2005). In the United States, about 6% of married women struggle with infertility (Chandra et al., 2005). In addition, the data from the Pregnancy Risk Assessment Monitoring System (PRAMS) showed that from 2004 to 2005, 10.5% of out of 25,358 women who were trying to become pregnant received some type of reproductive medical assistance (Simonsen, Baksh & Stanford, 2012). Considering that these data did not include those who suffered from miscarriages, the number of infertile women may be much higher (Chandra et al., 2005; Simonsen et al., 2012).

Infertility is caused by a variety of reasons, and both males and females can carry contributing factors (CDC, 2013). For males, contributing factors include defective sperm and abnormality in testicles. For females, contributing factors include any diseases in the pelvic area, ovarian or uterus dysfunction, and hormonal imbalance or irregularity (CDC, 2013; Judd, 2009). Polycystic ovary syndrome (PCOS), which is “a hormone imbalance problem that can interfere with normal ovulation,” and premature ovarian insufficiency (POI), which causes women’s ovaries to fail, are some of the common causes of female infertility (CDC, 2013). Blockage in fallopian tubes—called tubal patency—can contribute to infertility because this condition inhibits sperm travel. The risk of infertility may increase with women’s age because as women become older, their ovaries release fewer eggs and the quality of eggs may decrease (CDC, 2013).

Infertility treatment. Many women who face infertility usually receive numerous medical treatments. Simonsen et al. (2012) conducted a survey study to determine common infertility treatments used with women. For women who reported an experience of receiving medical assistance, 29.3% received fertility enhancing drugs, 20.6 % utilized assisted reproductive technology (ART). Others reported artificial insemination with drugs and surgeries (Simonsen et al., 2012).

Common fertility enhancing drugs includes Clomid, human menopausal gonadotropin (hMG), metformin, etc. The purpose of the most fertility enhancing drugs is to manipulate hormones in a woman’s body to encourage ovulation and production of eggs (CDC, 2013; Michie & Cahn, 1997). Since medications manipulate women’s hormones, side effects such as mood swings as well as temporary pain in breasts and ovaries, weight gain, and occasional nausea may occur (Michie & Cahn, 1997). The most common ART is in vitro fertilization (IVF),

which “involve[s] surgically removing eggs from a woman’s ovaries, combining them with sperm in the laboratory, and returning them to the woman’s body” (CDC, 2013). Other treatment may include intrauterine insemination (IUI). This procedure, often called artificial insemination, requires inserting collected sperm into a woman’s uterus directly (CDC, 2013).

Reproductive medical treatments may not be accessible to every woman in need because of their high costs (Simonsen et al, 2012). Statistically, women with higher incomes and insurance seem to seek more medical help. On the other hand, some infertile women who fall into the categories of minority and lower income may be facing financial burdens in order to gain the help they need with infertility. Also insurance policies can be affecting women’s medical treatment choices. Some states only mandate covering fertility enhancing drugs, while others cover IUI and IVF treatments (Simonsen et al, 2012).

Psychological Challenges within the Experience of Infertility

Generally, the infertility experience is considered stressful, and the most common psychological symptom that women experience is anxiety (Berger et al., 2013; Klemetti et al., 2010; Lykeridou et al., 2009). Recent researchers revealed that women who undergo infertility and its treatments experience high levels of psychological distress and anxiety more than men, and this could present serious obstacles during their treatment (Greil et al., 2011; Klemetti et al., 2010). Besides anxiety, some women also experience emotional distresses such as sense of loss, grief, and hopelessness (Berge et al., 2013; Kirca & Pasinlioglu, 2013; Lee. S, et al., 2010; Michie & Cahn, 1997). These emotional struggles do not only influence women, but may create problems in their interpersonal relationships, such as lack of communication and misunderstanding (Lerner, 2006). Those problems often fuel negative emotional responses by triggering feelings of guilt and shame (Lerner, 2006; Nelson, Shindel, Naughton, Ohebshalom &

Mulhall, 2008). However, some studies reported that the journey of infertility could bring positive changes to a woman's perspective (Berger et al., 2013). Researchers suggested that having strong support systems was the key to be able to perceive infertility as a positive process of life (Berger et al., 2013; Kirca & Pasinlioglu, 2013).

Differences in infertility for women and men. Although both women and men can be diagnosed as infertile, how they experience infertility may be different (Klemette, et al., 2010; Kirca & Pasinlioglu, 2013). According to Klemette, Raitanen, Sihvo, Saarni, and Koponen (2010), infertile women were more likely to have increased risk of developing mental disorders than infertile men. In their study, childless women were five times more likely to develop any anxiety disorder, such as panic disorder, than childless men (Klemette, et al 2010). Moreover, a survey conducted by Lykeridou, Gourounti, Deltsidou, Loutradies, Vaslamatzis (2009) revealed that the intensity of anxiety levels that infertile women, who participated in the study, experience was much higher than the normal standard. They found that those women's level of anxiety on the State-Trait Anxiety Inventory (STAI) was 44.5, which was more than the published normative level, 35.2. The anxiety level score for participants of this study was equivalent to the score of the population of people experiencing generalized anxiety disorder and hospitalized patients undergoing major surgeries (Lykeridou et al., 2009).

This difference between men and women may be the result of a difference in how they perceive infertility treatments (Klemette, et al., 2010; Kirca & Pasinlioglu, 2013). While some men tend to view the infertility treatment as a more "business" like process (Kirca & Pasinlioglu, 2013, p. 1622), some women perceive the treatment process as a more personal problem for which they are responsible; therefore, they may experience more emotional stress than men (Kirca & Pasinlioglu, 2013). However, social stigma and expectations regarding masculinity may

have inhibited some men from accurately evaluating their anxiety level and self-reporting through the survey studies. (Klemette, et al., 2010).

Emotional distress. Many infertile women seem to experience layers of overwhelming emotions throughout the process of treatment, as if they are riding on an “emotional roller coaster” (Berger et al., 2013). Although women’s personal emotional experiences vary, there are some common themes—such as emotions of failure, a sense of loss, and grief—found in the literature (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al, 2010; Lee, S. et al, 2010). These emotional responses seem to be co-occurring with failed treatment experiences (Berger et al., 2013; Kirca & Pasinlioglu, 2013; Lee, S. et al, 2010). Research also suggests that infertile women’s emotional struggles ultimately lead many of them to develop a negative self-perception (Berger et al, 2013; Kirca & Pasinlioglu, 2013; Lee et al, 2011).

In some studies, emotions related to perceived failure—such as hopelessness, sadness, disappointment, and anger—were identified as dominant emotional reactions that many infertile women experience through the treatment process (Berger et al, 2013; Kirca & Pasinlioglu, 2013). In an interview study conducted by Kirca and Pasinlioglu (2013), more than 60% of participants reported despair and disappointment, and more than 50% reported anger as their emotional reactions to the infertile diagnosis and treatment process (Kirca & Pasinlioglu, 2013). Berger, Paul, and Henshaw (2013) conducted another written interview study, and their participants’ dominant emotional reactions included sadness and hopelessness. These emotional reactions seemed to occur with frustration toward the treatment process; every failed treatment experience was frustrating and disappointing for some women, and eventually they became devastated (Berger et al., 2013; Kirca & Pasinlioglu, 2013). In addition, not being able to control the treatment result seemed to create a sense of hopelessness (Berger et al., 2013). Both studies

concluded that many infertile women started to create a negative self-perception after repetitive failing treatment experiences; they might build the anger toward themselves, decreased self-worth, and perceived themselves as failures (Berger et al, 2013; Kirca & Pasinlioglu, 2013).

A sense of loss, another common emotional reaction, may accelerates the development of negative self-perceptions (Berger et al, 2013; Kirca & Pasinlioglu, 2013). In the literature, a sense of loss is not only discussed in relation to the loss from miscarriages or unsuccessful treatments, but also discussed in relation to the loss of faith and trust in their womanhood (Berger et al, 2013; Kirca & Pasinlioglu, 2013). The research revealed that when women could not achieve full-term pregnancy because of miscarriages, stillbirths, or non-viable pregnancies, many of them felt a deep sense of loss, which was comparable to witnessing death (Berger et al, 2013). Inability to conceive a child ultimately connected to loss of womanhood (Berger et al, 2013; Kirca & Pasinlioglu, 2013). Some interview studies results suggested that many women believed that “having children was the most important thing in their lives” (Kirca & Pasinlioglu, 2013, p. 1620), and “having children defines” their womanhood (Berger et al, 2013, p. 61). As they go through infertility treatment and repeatedly experience losses, some women also lose trust in themselves and develop self-doubt (Berger et al, 2013; Kirca & Pasinlioglu, 2013).

Similar to the sense of loss, many infertile women seem to experience grief in relation to unsuccessful treatment outcomes, and infertility-related grief tends to bring in much deeper emotional struggles (Berger et al, 2013; Lee et al, 2011). Some research showed that many women tended to achieve acceptance of loss for the first several unsuccessful treatment outcomes, and were able to motivate themselves to try other treatment options or cope by maintaining hope (Berger et al, 2013; Lee et al, 2011). For instance, in a questionnaire completed by 95 women who experienced failed IVF treatments, acceptance was one of the leading grief

responses (Lee. S, et al, 2011). However, the same study also showed that some infertile women often thought they sacrificed themselves for unsuccessful treatments and developed denial or depression eventually (Lee. S, et al, 2011). Indeed, some women perceived IVF or any other treatment failure the same as miscarriages (Berger et al, 2013). Even if they did not technically conceive, the failed implantation of an embryo could be experienced as the equivalent of miscarriage or loss of life for these women, thus they developed grief and depression (Berger et al, 2013; Lee. S, et al, 2011).

All infertility related emotional distresses may increase in intensity over the duration of treatment (Greil et al 2011; Klemetti et al, 2010). A longitudinal study showed that women who actively received long-term treatments increased their level of distress over time compared to those who did not continue treatments (Greil et al., 2011). Another study also stated that infertile women in long-term treatment presented poor levels of psychological well-being, evidenced by symptoms of anxiety disorders (Klemetti et al., 2010). These studies suggested that the treatment process itself influenced or contributed to fertility-specific distress beyond the effect of infertility alone (Greil et al., 2011; Klemetti et al., 2010). Continuous combinations of stressors can be considered a cause of increased levels of stress over time (Berger et al., 2013; Greil et al., 2011). Infertility treatment tends to be demanding; for instance, some treatment protocols require monitoring one's daily diet, physical condition, and self-medication. Also, the treatment process can become mentally and financially stressful (Berger et al., 2013). Dealing with all those emotional responses discussed above, along with combinations of different stressors, can make the treatment process even harder to endure over time (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lee. S, et al., 2011).

Infertility's influence on relationships. Infertility not only brings personal emotional distresses, but also it may create negative impacts on women's relationships with their significant others (Berger et al., 2013; Lerner, 2006; Nelson et al., 2008). Some struggles many infertility couples experience are miscommunication and sexual problems (Lerner, 2006; Kirca & Pasinlioglu, 2013; Nelson et al., 2008). These problems can contribute to the development of shame and guilt toward their partners, and cause an emotional and physical distance within many couples' relationships (Berger et al, 2013; Lerner, 2006; Nelson et al, 2008).

A study that used interviews to understand couple's journey of infertility revealed that the majority of participants experienced communication problems with their significant other (Lerner, 2006). Because emotional distresses from infertility experiences are often intense, couples may avoid talking about their feelings in order to protect one another from psychological pain; this often causes a decrease in direct and open conversations about their emotional experiences, which may lead to dissatisfaction in their relationship (Lerner, 2006). For instance, Kirca & Pasinlioglu (2013) found that more than 70% of participants reported their wish to have their husband deeply understand their experience. Although an avoidance of communication may come from caring for each other, lack of communication creates a sense of psychological distance and mistrust between partners (Berger et al, 2013; Lerner, 2006).

Problems in couples' sexuality is another commonly stated issue in the infertile population (Kirca & Pasinlioglu, 2013; Lerner, 2006; Nelson et al, 2008). According to research done by Nelson, Shindel, Naughton, Ohebshalom, and Mulhal (2008), 26% of infertile women were considered at risk of sexual dysfunction. Those women claimed experiences of psychologically-induced sexual dysfunction, such as a decrease in arousal and desire, more than physical sexual dysfunctions (Nelson et al, 2008). Psychologically-induced sexual dysfunction

may relate to those women's feeling of shame or guilt toward their partners (Berger et al., 2013; Nelson et al, 2008). Because of their inability to naturally conceive, some infertile women may worry that they are not contributing to their relationships. If women's conditions are causing infertility, they may also feel guilty (Berger et al, 2013; Lerner, 2006). In addition, sexual dysfunction could be influenced by infertility treatment. In the study, 52.9% out of 204 women felt uncomfortable with scheduling sexual intercourse as a part of treatments, and 57% considered sexual intercourse as duty rather than an intimate activity with their partners (Kirca & Pasinlioglu, 2013) Perhaps, infertility treatments may shift some couples' sexual experiences from relational to more functional.

Significance of support systems. Even though many studies focused on the negative emotional impacts of infertility, some studies reported that some women gained positive effects from infertility experiences, and those women's positive reactions seem to have correlation with having a strong support system (Berger et al, 2013; Kirca & Pasinlioglu, 2013). Gaining support from their spouse, family, and friends is commonly reported as the most important aspect of coping for women who went through infertility treatment (Berger et al, 2013). The more supportive couples are to each other, the more they perceive their infertility experience positively (Kirca & Pasinlioglu, 2013). For instance, couples may feel closer to each other because infertility experiences contribute to strengthening their relationships by going through hardship together (Berger et al, 2013; Kirca & Pasinlioglu, 2013). When women looked back at their crisis experiences, some women gained gratitude for the support of the people surrounding them as well as their own emotional strength (Berger et al, 2013).

Social Challenges within the Experience of Infertility

Topics surrounding reproduction are considered private or taboo in current U.S. society, and there are myths about infertility (Michie & Cahn, 1997; National Infertility Association [NIA], 2015). Also, current society has a tendency to acknowledge women for producing children and strongly value the natural process of conception (Berger et al, 2013; Michie & Cahn, 1997). Thus, many women seem to believe that they “must produce biological children” naturally (Michie & Cahn, 1997, p. 125). These social expectations and tabooed conversations around reproduction place many infertile women in isolation, or women may choose to be secretive in order to avoid stigmatization from society (Berger et al, 2013; Michie & Cahn, 1997).

Social view of infertility. Infertility and associated medical treatments have social stigmas as well as myths, which usually create negative images of infertility or women without children (Michie & Cahn, 1997; NIA, 2015). According to National Infertility Association (NIA, 2015), common misbeliefs about infertile couples or women include: infertility is all psychologically induced, and all people have to do is relax; infertile people are doing something wrong; and infertile people are biologically or sexually dysfunctional. In addition, in U.S. society, which values women as child-bearers, negative images may be projected on childless women (Michie & Cahn, 1997). Dominant images of childless women include characteristics such as materialistic, less nurturing, and selfish. People may assume that childless women are sacrificing the chance to have children for their career. Others may think that those women are infertile because of their lack of ability to maintain their health (Michie & Cahn, 1997; NIA, 2015). These social myths and stigmas ultimately make many infertile women believe that there

is something wrong with them and fuel the low self-worth that they have developed (Berger et al, 2013; Michie & Cahn, 1997).

Moreover, concerns around the advancement of medical reproductive technology often brings controversial discussions (Michie & Cahn, 1997). For some feminists who celebrate women's ability to carry children and natural childbearing process may perceive medical treatments as an unnatural control on the pregnancy process. The unnatural nature of reproductive technology could be considered a violation of nature because it "tricks" the woman's body into getting pregnant (Michie & Cahn, 1997). Also, a more patriarchal perspective may make people consider that infertile women who chose to use medical technologies are "self-righteously condemning", and they should adopt children in need instead (Michie & Cahn, 1997, p 128). For some infertile women, considering different options of treatment or childless life may become challenging because they are placed in between the social expectation to have children and these contradictory perspectives toward reproductive technology.

Social isolation. Social stigma and negative reactions from people often make infertile women feel embarrassed, and the feeling of shame leads many of them to avoid social situations and isolate them from interpersonal relationships (Kirca & Pasinlioglu, 2013). Many women reported insensitive reactions or stigmatization toward infertility from people and social communities, such as a person asking them "When are you having baby?" or "Why do you wait?" and they felt frustrated (Berger et al, 2013; Kirca & Pasinlioglu, 2013). Because of this, women may "spent less time with other people" after diagnosis of infertility (Kirca & Pasinlioglu, 2013, p 1623).

Facing insensitive reactions, especially during family or friends gatherings is hurtful for many infertile women (Berger et al, 2013). According to the study, more than half of the women were annoyed by others asking them about having a child with expectations of them being fertile. Those women did not want to talk about children and avoided situations or places with children due to feelings of embarrassment. The majority of women also reported that they got furious or frustrated with people's lack of understanding of some treatments (Kirca & Pasinlioglu, 2013).

Psychotherapy and Infertility

Because of the layers of psychological stresses that the experience of infertility causes, the need for psychotherapy is expressed in much of the literature (Berger et al, 2013; Kirca & Pasinlioglu, 2013; Lykeridou et al, 2009). For many women, support is the key for overcoming issues around infertility (Berger et al, 2013). Many infertile women have a tendency to seek help in a community environment, and the help can be provided by friends, family, and their partner, but also by different styles of therapy (Berger et al, 2013; Faramarzi, et al., 2013; Kirca & Pasinlioglu, 2013; Koszycki, Bisserbe, Biller, Bradwejn, & Markowitz, 2012; Mosalanejad & Koolee, 2011; Ramezanzadeh, et al., 2010). Some studies proved that having psychological interventions along with medical treatment can increase the success level of treatment as well.

Efficacy of psychotherapy. Because gaining support is important to many of those experiencing infertility, group psychotherapy is considered an effective way to reduce psychological symptoms (Berger et al, 2013; Mosalanejad & Koolee, 2011). In a study conducted by Mosalanejad and Koolee (2011), they had 33 women in a treatment group, who received 12 group counseling sessions utilizing Logotherapy method, which focuses on improving participant's quality of life. Other 32 women in a control group received an educational presentation about infertility. They compared women's infertility related stress

levels, and the results showed the treatment group decreased the level of stress significantly compared to the control group. They suggested that focusing on improving one's quality of life might have contributed to the decreased level of stress. By addressing existing strengths in women's lives, Logotherapy might reduce their stress, anxiety, and worry, and it might prevent them from feeling hopeless (Mosalanejad & Koolee, 2011).

Koszycki, Bisserbe, Biller, Bradwejn, and Markowitz (2012) studied the efficacy of personal psychotherapy on infertile women with a depression diagnosis. They randomly divided 31 participants into two groups; one received interpersonal psychotherapy (IPT), which was indicated as "a first line treatment for" mood disorders, and another received brief supportive therapy (BSP) for 12 weeks (Koszycki et al., 2012). Although they concluded IPT seemed to decrease depression and anxiety symptoms more than BSP, the study showed both IPT and BSP improved those symptoms significantly. Participants who received IPT reported that therapy sessions were helpful to accepting a childless life or considering other treatment options (Koszycki et al., 2012).

Similarly to IPT, cognitive behavioral therapy (CBT) was also found to be beneficial to infertile women (Faramarzi, et al. 2013; Ramezanzadeh, et al., 2010). Faramarzi, Pasha, Esmailzadeh, Kheirkhah, Heidary, and Afshar (2013) provided ten CBT based therapy sessions including relaxation training, restructuring, and elimination of negative automatic thoughts to 29 infertile women who presented with depressive symptoms, while 30 other infertile women in the control group received anti-depressant medications for 90 days. They compared the Beck Depression Inventory (BDI) score and the Fertility Problem Inventory (FPI) results for women in each group. The results showed that both medications and CBT helped reduce women's depressive symptoms, but only CBT was effective for reducing fertility-specific problems, such

as social concerns, sexual concerns, marital concerns, and the rejection of a child-free lifestyle (Faramarzi et al., 2013).

Ramezanzadeh, Noorbala, Abedinia, Forooshani, and Naghizadeh (2010) conducted a similar study with infertile couples and found the same result. One interesting finding of their study was that couples in the treatment group, who received CBT interventions before the medical protocol, not only decreased their depression level significantly, but also had higher pregnancy rates than couples in the control group. Close to 50% of the couples in treatment group became pregnant while couples in another group only had a 7% pregnancy rate (Ramezanzadeh et al., 2010). Although mood improvement and stress reduction might not be the direct cause of increased pregnancy rate, these studies showed the possible benefit and efficacy of CBT treatments on more successful infertility treatments (Faramarzi, et al. 2013; Ramezanzadeh, et al., 2010).

From all these studies' results, a positive relationship between psychotherapy and experiences of infertility are clear. Use of psychotherapy along with medical treatment seems to help many infertile women cope through difficulties. Also, differences in types of therapy does not seem to matter in terms of its efficacy; all therapy styles that were discussed above were proven to improve many women's mood and reduce infertility related stress. This makes me wonder if DMT, which is a type of psychotherapy, can be also utilized to support this population and potentially decrease infertility related stress and somatic symptoms.

Dance/Movement Therapy in the Medical Field

In the medical field, DMT has been used as a tool to provide psychosocial support alongside medical treatment (Goodill, 2005). According to the American Dance Therapy Association (ADTA, 2015) DMT is “the psychotherapeutic use of movement to further the

emotional, cognitive, physical and social integration of the individual,” and it is practiced in the mental health, medical, and educational settings, as well as other health care fields (para. 1). Regaining or improving one’s sense of wholeness by uniting the body, mind, and spirit is a fundamental idea of DMT (Levy, 2009).

The use of DMT and its efficacy for different medical conditions has been widely studied. However, not many studies discuss a direct connection between DMT and those who struggle with infertility. Studies that addressed DMT’s effectiveness or potential benefits on breast cancer and gynecological cancer population may help consider a possible connection between DMT and infertility because these women-specific medical conditions often elicit similar emotional responses to infertility experiences (Goodill, 2009).

Medical DMT. Goodill (2009) stated that DMT synthesizes psychological and social theories with artistic and kinesiological and biological principles of movement. She also stated that clinical DMT is considered as “a mind/body integrated approach to psychotherapy” (Goodill, 2009, p. 16). In the medical field, “DMT services [are available] for people with primary medical illness, their caregivers and family members ...and DMT functions primary as a psychosocial support intervention, complementary to ... standard medical treatments.” (p. 17). Improvement of quality of life, which includes one’s “functional status, access to resources, opportunities to use one’s abilities to pursue interests and a sense of well-being” (Lehman, 1999, p. 175), is an overarching goal for medical DMT. (Goodill, 2009). In order to achieve this goal, therapists often focus on improving individual’s “emotional well-being, meaningfulness, optimism, goal setting, the sense of control, self-perception, and social functioning” (Goodill, 2009, p. 25). There are five core foci for medical DMT: vitality, coping, self-efficacy, body image of illness, and mood (Goodill, 2009).

The medical field may consider DMT one of the options of complementary and alternative medicines (CAM) that provide holistic care to patients with illness (American Cancer Society [ACS], 2008; National Center of Complementary and Integrated Health [NCCIH], 2014). CAM refers to using non-mainstream approaches together with or in place of conventional medicine. CAM implies natural products and supplements, such as herbs and vitamins, and mind and body practices, which include DMT (NCCIH, 2014). Also, American Cancer Society (ACS, 2008) introduces DMT as a CAM that helps improving cancer patients' mobility, confidence in their bodies, and psychological well-being (ACS, 2008). Although CAM, including DMT, are widely adapted in the medical field, these treatments are still considered non-mainstream due to a lack of research to prove effectiveness of these treatments (NCCIH, 2014).

DMT with cancer treatment. DMT has been utilized as supportive treatment for women with breast cancer, and some studies confirmed its positive effect on improving many women's psychosocial and physical well-being (Debbel-Hope, 2000; Sandal, 2005; Serlin et al., 2000). Groups of women who completed their medical treatment for breast cancer attended six weekly group DMT sessions based on authentic movement techniques provided by Debbel-Hope (2000), and those participants reported greater improvement in their physical well-being, reduced fatigue, and reduction of somatization. Also, over 60% of participants identified social support as the greatest benefit that they gained from these DMT sessions. (Debbel-Hope, 2000). Similarly, Sandal, Judge, Landry, Faria, Ouellette, and Majczak (2005) conducted a twelve week DMT intervention with women with breast cancer, and the results showed that participants had significant improvement on their health related quality of life and body images (Sandel et al., 2005). Both studies showed that DMT interventions were effective due to its ability to improve

an individual's quality of life as well as ability to provide social support (Debbel-Hope, 2000; Sandal et al., 2005).

Serlin, Classens, Frances, and Angell (2000), who provided DMT-based support groups to women with breast cancer, discussed the unique aspects of DMT. In their study, they made a correlation between participants' decreased level of depression or anxiety and participants' improvement in their observed movements. While participants' self-reported data showed decreased depression and anxiety symptom, Serlin et al. observed participants becoming more connected to their bodies. They also observed changes in the women's body attitudes. The women's movements became more invigorated and more confident. They believed that DMT enabled the women to have sense of control and confidence in their body even with their illness (Serlin et al., 2000).

Based on these studies about DMT and cancer treatment, Ginsburgs and Goodill (2009) created a clinical therapy model for the gynecological cancer population. They created a nine week long group intervention plan; each week had progressive theme: developing trust and community, personal identity and support, body awareness and body boundaries, coping with anxiety, coping skills and femininity, and spontaneity and closure. Laban Movement Analysis (LMA), Burtinieff Fundamentals, and Authentic Movement were employed as the movement techniques. In this research, they shared a case study wherein a patient who participated in this group process progressively improved her coping skills by accepting social support and gaining the strength to explore her emotional needs (Ginsburgs & Goodill, 2009).

DMT with infertile couples. Recently, Cunningham (2014) conducted a study to explore the benefits of DMT with infertile couples. Clinical counselors and dance/movement therapists who worked with infertile couples shared their experiences and body/mind practices that they

thought were impactful. Also, counselors were asked to make assessments on their infertile couple clients' quality of life by using FertiQol, which specifically measures the well-being of a person struggling with infertility.

The results showed that infertile couples' average level of satisfaction with their quality of life was less than 30%. Counselors' assessments of their clients' psychological, social, and relational satisfactions was close to 30%, while emotional satisfaction was less than 10%. The study suggested that DMT's unique approaches, which includes the use of embodiment, kinesthetic empathy, and touch might help improve infertile couples' quality of life. For instance, clients could safely express their distressed feelings and thoughts through movement. Embodying the couples' movement seemed to help create the therapeutic relationship between clinician and clients or among group members, which could provide the social support that infertile couples needed. Moreover, they suggested that the use of kinesthetic empathy and intentional touch might improve couples satisfaction around intimacy (Cunningham, 2014).

Conclusion

The psychological impact that infertility experiences have on many women are overwhelming. Infertility influences nearly every aspect of their lives (Berge et al, 2013; Kirca & Pasinlioglu, 2013; Lerner, 2006; Lykeridou et al, 2009; Michie & Cahn, 1997; Nelson et al, 2008). Unfortunately, their emotional struggles are often exacerbated by social stigmas and insensitive community environments (Berger et al, 2013; Kirca & Pasinlioglu, 2013). Additionally, the issues surrounding infertility can ruin some women's romantic or marital relationships (Berger et al, 2013; Lerner, 2006; Nelson et al, 2008). For many infertile women, these problems must be taken seriously and treated in order for them to be able to go through the treatment process successfully.

To support this population, the use of psychotherapy has been studied widely, and its benefit is proven in the research (Faramarzi et al., 2013; Koszycki et al, 2012; Mosalanejad & Koolee, 2011; Ramezanzadeh, et al., 2010). Many types of psychotherapy can improve their psychological well-being by reducing infertility related stress and anxiety levels, and through gaining the social support they need (Koszycki et al, 2012; Mosalanejad & Koolee, 2011). However, those studies did not seem to approach infertile population comprehensively; they tended to focus on treating only psychological needs of women with infertility and did not address other physical or kinesthetic needs.

Infertility has a strong psychological impact on many women, but at the same time, many of their struggles are related to dysfunction in their bodies or loss of its biological ability to conceive (Berge et al, 2013; Kirca & Pasinlioglu, 2013; Lee, S. et al, 2010; Nelson et al, 2008). Considering this connection between women's psychological and physical struggles, DMT's unique body-mind based approach may be a suitable treatment for infertile women. However, DMT has not been widely utilized with those who struggle with infertility issues. Although Cunningham's (2014) study seemed to be able to make a connection between DMT and infertility, information may be insufficient because the study did not include direct voices from couples who struggled with infertility; the data was based on clinical practitioners' perspective on the benefits and efficacy of their interventions. This study challenges researchers to further understand the experience of infertility in relation to DMT by directly connecting to women who experienced infertility.

Chapter III: Methods

The methods for this study were chosen in order to create valuable research as well as to fulfill my personal interest in incorporating body-based techniques into this thesis study. As I constructed this study, I realized that a traditional phenomenological method, such as verbal interviews, would not be enough to gain a body-mind integrated understanding of the phenomenon of infertility. Verbal conversations usually provide me an inroad to see person's mind, such as thought and emotional process, but conversations never gave me a full understanding of the person's body-felt experiences or kinesthetic responses regarding their thoughts and feelings. Thus, in order to highlight the body-mind connection within experiences of infertility in this study, I decided to incorporate a movement interview, my embodiment, and choreography as creative body-based techniques.

Phenomenology as a main methodology provided an overall framework to this study. Because I chose interviews as the data collection method—which is traditionally used in phenomenology—I employed Kvale's interview analysis (Kvale & Brinkman, 2009) to provide more specific structure to the process of analysis. Kvale's interview analysis has six steps to follow. It has structure and provides specific tools. While phenomenological research can take many different forms, these six steps brought clarity to the study and enabled me to maintain consistency. Yet these steps also have flexibility and allowed my personal choices to come in, which created great balance of structure and freedom to conduct this rather creative research procedure.

As previously mentioned, the body-mind approach occurred in creative ways. In addition to verbal interviews, I decided to conduct movement interviews simultaneously. My embodiment was employed to analyze the movement data. The choreographic process, which I conducted

with a few volunteer dancers, was utilized as a way to synthesize the verbal and movement interview data in order to understand the body-mind connection with in the experience of infertility. By combining traditional and creative methods together, this study aimed to integrate psychosocial and kinesthetic understanding to establish a fuller view on infertility experiences.

Methodology

Phenomenology. Phenomenology aligned with this study because of its ability to obtain a description of experiences and focus on “the wholeness of experience rather than solely on its objects or parts” (Moustakas, 1994, p. 21). This approach allows researchers to seek the essence of experience that all people have about the phenomenon in order to find a common thread which describes the very nature of the targeted phenomenon (Croswel, et al., 2007; Moustakas, 1994). I believed that phenomenology allowed me to gain a comprehensive understanding of infertility as well as basic needs of this population.

Also, this approach focuses on understanding one’s unique experience of a phenomenon while eliminating preexisting prejudgments or presuppositions (Moustakas, 1994). This open and nonjudgmental perspective was indispensable in order to conduct a valid research study. Since my personal experiences created assumptions around this topic, it was important for me to set aside my personal experiences as much as possible to gain credible research results. This methodology led me to perceive infertility and the issues women face “as if for the first time” (Moustakas, 1994, p. 34).

The process of eliminating my personal pre-judgment and biases is called epoche, which means “refrain from judgment” in Greek (Moustakas, 1994, p. 33). According to Mouskatas (1994), epoche needs to be practiced alone in absolute presence of self. Researchers may engage in reflective-meditation and notice preconceptions and prejudgments in consciousness. This

process continues until researchers experience internal closure; then they may bracket out prejudgments by writing them down. The process of epoche enables and increases researchers' receptiveness and readiness to encounter new experiences, and it allows them to invite things, events, and people into their consciousness as fresh information (Moustakas, 1994). In this study, I engaged in free journaling before and after interviews as well as during the entire analysis process. Journaling as epoche played an important role by challenging me to create new awareness and understanding about the phenomenon of infertility. In addition, I was hoping this approach would allow participants' true experiences to come forward, rather than categorizing their experiences into my personal assumptions.

Kvale's interview analysis. Kvale's analysis method provided a specific structure to the verbal part of data analysis procedure. This method has six steps of analysis to follow. Having a clear guideline helped me maintain consistency thorough out the analysis process. Along with the six steps, I utilized one of several tools identified by Kvale and Brinkman (2009): the tool I chose was meaning condensation. Meaning condensation is utilized to find themes throughout interviews and find answers to my research questions. Although this method has specific guidelines to follow, Kvale and Brinkman (2009) also acknowledged importance of flexibility and the researcher's intuitive act.

The first three steps of the six steps of analysis happened during each interview through interactive communications with participants. The first step included participants describing their lived experience. This open disclosure may encourage participants to discover new relationships to the phenomenon or see new meanings in what they experienced. This is considered the second step. In the third step, the researcher interprets the meaning of what the participants

described, and the researcher and participants continue the conversation until there is only one possible interpretation left (Kvale & Brinkman, 2009).

After the interview data is transcribed, the researcher proceeds to the fourth step of analysis; the transcribed interview is interpreted by the researcher, followed by clarification between the essential data and the non-essential data (Kvale & Birkman, 2009). The researcher will determine which data is more important and eliminate less-important data. Here is when I decided to use meaning condensation as a specific tool to find common themes between interviews. With meaning condensation, the researcher compresses big statements made by participants into shorter phrases or restates them in just a few words, which eventually breaks down text into meaning units. By going through meaning units, dominant themes are found and restated by the researcher. Finally, themes of entire interviews are tied together to create a description of the phenomenon (Kvale & Birkman, 2009).

The last two steps are re-interview and action (Kvale & Birkman, 2009). The fifth step, re-interview, is called the member checking process in this study. The member checking process provides participants an opportunity to make comments about the researcher's interpretation as well as to elaborate on their own original statements. The sixth step, action, is considered optional, yet it was utilized in this study. In the action stage, participants begin to act from new insights they have gained during the interview, or the researchers and participants together create larger social action to make a change (Kvale & Birkman, 2009).

Although this method provided very clear steps, which is useful for researchers, Kvale and Birkman (2009) admitted that some may not always follow these steps. Instead of strictly following each step, they recognized the value of each researcher's intuitive choice making process, and invited researchers to bring their own ideas, specialized knowledge, and unique

skills to design the study (Kvale & Brikman, 2009). Having this type of flexibility within the structure helped me to be consistent while allowing the interview and analysis process unfold organically and me to bring in my intuitive response to the study.

Body-based techniques. In order to gain body-mind integrated understanding of the experience and the basic needs of infertile women, I employed movement interviews, which aimed to highlight the body-mind connection within their experiences of infertility. The movement data was analyzed through my embodiment. Embodiment is often used in DMT session as a means of mirroring the client, through which the therapist aims to gain kinesthetic empathy (Levy, 2005). Embodiment is not only recreating someone's movement in one's own body, but also requires "active sensing of bodily sensation, impulse and affect" (Carroll, 2011, p. 251). Also, a recent study shows that embodying a posture or movements can create similar emotional responses to the person who provided the original posture or movements (Winters, 2008). Parviainen (2003) described that kinesthetic empathy is "re-living and an epistemological placing of us 'inside' the other's kinesthetic experience" (p. 161). Through finding knowledge of others bodily movements, kinesthetic empathy makes it possible for people to understand others' non-verbal experiences (Parviainen, 2003). In this study, the embodiment was used to evoke my kinesthetic empathy in order to understand the women's bodily-felt experiences.

Choreography was employed as a synthesizer of both verbal and movement parts of data analysis. Since I used my own embodiment and kinesthetic empathy to understand the women's experiences, it was a very natural choice for me to engage in a choreographic process to integrate verbal and movement data to establish a body-mind integrated understanding of the experience of infertility. Also, creating a presentable dance piece fulfilled one of the goals of this study, which is to give a voice to this population.

Participants

Recruitment. Participants were invited to this study through my personal contacts as well as local infertility support group organizations. I originally started out by sending out recruitment information and a written invitation letter (see Appendix B) via e-mail to my personal contacts, and they were encouraged to forward information to whoever they thought would be interested in participating in this study. However, my personal contacts connected me to only one participant. Therefore, I decided to reach out to local support groups and those organizations hosting support groups to distribute information and recruit participants. Luckily, I found two support groups that agreed to distribute the research information.

When I reached out to a founder of one of the local support groups, the recruitment process shifted dramatically. The founder of a support group, who experienced infertility as well, suggested that those who are in the middle of treatment might be emotionally too fragile to talk about their journey. Also, she convinced me that many women tend to be secretive about their condition as they do not know the future outcome of treatment. I realized it was going to be very difficult to find women in treatment who would be willing to participate. This led me to expand the original recruitment criteria. Originally I was only targeting women who were in the process of receiving the treatment in order to specify their needs within the treatment period. However, I decided to include women who had finished their treatment process regardless of the outcome. With this change and the founder's help, I successfully recruited several women from this particular support group.

Finding another support group to contribute to this study was difficult because each group was founded based on different rules and cultural norms; some groups were founded in purely peer support, some were more therapeutic, and some were religious. Many groups did not

agree to distribute my study information. The main reason was usually to protect their members' confidentiality. Also, several groups could not contribute because they are established based on specific religious beliefs or therapeutic frameworks, which did not align with this study's theoretical framework or did not agree with the goal of the study. I finally found a group leader who was personally interested in my study concept. He intentionally picked some women in his group whom he thought might be interested in the study. Through his referral, I was able to connect to several other women as potential participants.

After referrals were made, I contacted potential participants via e-mail to confirm their interests. I also had email or phone conversations with all women in order to deepen their understanding of the study before they signed the consent form (see Appendix C). I described the nature of the study as well as each step of the procedure. Many of them were curious about the style of interview, which included both discussion and movement. Some of them showed concern about their limited movement capacity because either they were pregnant or not feeling comfortable moving. I explained to potential participants that movements could be minimal even gestural or postural.

I had seven potential participants who I came in contact with, yet two of them opted out before they signed the consent form. The main reasons of their decision were that they were concerned the study would potentially evoke emotional distress. I ended up having five participants who fully understood and agreed with the purpose of this study and this rather unique approach. After clarifying the procedures, five women signed the consent form to participate in this study. The consent form was signed before scheduling interviews. All participants received a hard copy of the form on the day of interview as well.

Demographics. This study focused on a population of infertile adult women over the age of 18 in the Chicagoland area. Participants were required to have current or past experience receiving reproductive medical treatments for infertility, such as uses of fertility enhancing drugs, experiences in IUI or IVF treatments, etc. In addition, I specifically focused on women whose own physical conditions caused their infertility rather than those whose partners' physical conditions caused their infertility. By delimiting women who have children by adoption, and women whose partners' physical conditions are main contribution to their infertility, I wanted to minimize variables which can possibly influence women's perspective on their infertility experiences. There was no limitation on participants' ethnicity.

I recruited five individuals, who were 36-42 years old, all Caucasian. Four of them were married, and one was in the process of separation. At the time of interviews, participant A had a child as a result of treatments, and B and C were pregnant. Participant D had her first child through a surrogate, and she was receiving treatments during the interview period to have a second child. Participant E, who was in the process of separation, just finished her last cycle of treatment. She chose to freeze her eggs, and was taking a break from the treatment cycle. She had not had successful results yet, but she expressed her willingness to continue her treatment. Depending on their age and physical condition, experienced treatment procedures were varied. Yet, the common treatment procedure that everyone went through was IVF (See Appendix D).

All of the participants volunteered not only because they wanted to share their stories to positively impact the fertility community, but also they were intrigued by the concept of the body-mind connection and my approach to the study. Three of them were working in fields that somewhat relate to physical activity, such as fitness, Pilates, and theater. This made the

recruitment process easier because they already had interest or experiences with movement in their daily lives.

Data Collection

Setting. Each participant set the schedule for the individual interviews. Some of them needed to reschedule or postpone the interview because the status of treatment did not allow them to travel. Participants were invited into a classroom or a dance studio on Columbia College Chicago's campus for the interview.

Interviews. Data was collected through semi-structured individual interviews, which included both verbal and movement components. Each interview lasted in the range of one hour to two and half hours. Interview questions were formulated prior to the interviews (see Appendix E), yet I flexibly picked and altered questions based on participants' experiences and what they wanted to share during interviews. Participants were asked to explain their experiences in each phase of their treatment process, such as pre-diagnosis phase, diagnosis phase, beginning of treatment phase, etc. in chronological order because I wanted to understand the progression of their experience as well as changes in their needs along with the treatment process. Providing this time line to follow helped both participants and me stay organized and focus on appropriate topics for the study.

By starting the questioning with the starting point of their infertility journey, participants naturally began telling their experiences as stories. Once they started telling their stories, it was organic for them to follow their timeline of experiences, and often participants ended up answering my questions without my prompting. I also added several in depth questions to fulfill my spontaneous curiosity that arose during each interview. Those questions were mainly about

participants' deeper feelings. This process sometimes helped participants to recognize their internal needs that they might not have noticed before.

The movement interview was conducted alongside the verbal interview. Along with verbal interviews participants were asked to create poses or gestures which represented how they felt remembering or talking about their experiences in the moment. This process was supported by my observation, body-part identification, and participants' use of images. Four out of five of them expressed that they did not know how to put their feelings into movements or gestures. I helped them create movements by stating my observation of their natural movements happening in their bodies during the conversations. For instance, I picked up repetitive gestures or postures that each participant did while they talked about a certain topic. Then, I asked them how those movements were related to their feelings. By making connections between their words and those unconscious, yet natural gestures that came out from their bodies, participants seemed to have an easier time creating movements. Asking participants to identify specific body parts that they felt certain sensations in was also helpful to elicit movements. Participants could pinpoint where they held tension or felt tingling, and they could develop movements around those body parts to express their feelings. In addition, many participants used imagery to help them connect their feelings to movements. When I asked for gestures or movements during the interviews, often participants answered the questions with specific images rather than movements. I encouraged participants to use their images in order to create gestures or movements.

While participants presented their feelings through movements, I embodied their movements in front of them. My embodiment seemed to help develop trusted relationships and connection between me and participants, which made the interview process easier. In some interviews, embodiment led us to have significant emotional moments. For instance, while I

embodied their movements in my body, some participants started crying remembering their experiences. Another time, we spent some time repeating movements without words, and we both agreed that we felt comfortable and relaxed by just moving and breathing together. By observing my embodiment of their movements, participants felt validated and understood. These senses of validation and understanding enabled participants to trust me instantaneously, even though they did not know me prior to the interviews.

After all of the interviews were complete, all of the participants agreed to answer follow-up questions as they arose during the course of this study. I sent out a follow-up questions regarding their experience of the interview. I became curious about how they felt about telling their stories because one of the participants mentioned the impact storytelling had on in her journey. She had experience sharing her story through attending groups as well as writing blog posts. I asked them via email to talk about how they felt or thought about their experience of sharing their stories through the interview. All participants responded positively to the interview process, and no one refused to answer specific questions. Both verbal and movement data were videotaped. After each interview session, the verbal parts of the interview were transcribed. Those videos and transcribed data were discarded after this thesis was submitted.

Data analysis.

Verbal interview analysis. Verbal sections of interview data were analyzed utilizing Kvale's interview analysis, following the six analysis steps discussed in methods section. Steps one to three were performed during each interview, and step four was conducted after all of the verbal data was transcribed by utilizing meaning condensation as an analysis tool. Steps five and six will be described in later sections of this thesis as they are part of the validation process and the results presentation.

The first three steps of analysis happened during each interview supported by interactive conversation between me and participants. Participants disclosed their experience guided by my formulated questions. As I responded to participants' stories by repeating or summarizing what they stated, they started to narrow down the issues, emotions, and needs that they particularly wanted to address. Through conversations, some participants made new realizations about their experiences. For instance, at the end of interviews, some participants noticed how they perceived the world or themselves differently before and after the experience of infertility treatments.

During step four, creating interpretation by meaning condensation, I extracted words and sentences that were commonly said in all interviews in order to identify possible themes. Sections that were associated with significant moments in interviews, or with strong emotions were extracted as well because I considered those moments essential in this study. The extracted data were sorted into broad categories. Next, I broke down each category into more detailed smaller groups. When I started to find relationships between each category, I re-categorized them into a much simpler form. These themes were organized in chronological order based on what participants experienced in their treatment processes. Furthermore, I divided themes into two sections in order to clearly explain the phenomenon of infertility and their identified needs.

Movement analysis through embodiment. The movement components of the interview were analyzed through my embodiment of participants' movements. My embodiment was employed to understand participants' movements through kinesthetic empathy, which informed participants' internal body-felt experiences. Embodiment was conducted during and after each interview. I embodied each movement given by participants in front of them in order to confirm accuracy. I not only recreated external shape and movements through my body, but I tried to

understand their internal body-felt experience by sharing how I felt in my own body, so that participants could confirm my embodiment's accuracy.

After all interviews, I created a list of salient movement qualities and repetitive patterns of movements across all participants along with my insights through kinesthetic empathy. Movements and their qualities were named utilizing Laban Movement Analysis (LMA), which is a tool to breakdown, describe, notate, and reconstruct movements (Moore, 2009). In addition, as many participants used imagery to explain or create their movements, I noted some strong images with corresponding movements.

Choreography as synthesizer. Finally, the data synthesizing process was conducted through choreography, and three dancers were invited to join this process. Three dancers were classmates of mine, and they were selected based on their ability to exhibit bound flow in their movements because bound flow was most commonly presented by all participants. The dancers and I engaged in an improvisational process based on identified verbal themes utilizing salient movement qualities. In addition, specific movements given by participants were also shared with dancers, and we deconstructed, elaborated, and combined those movements in order to create movement phrases. Through these processes, we worked on finding relationships between salient movements and each theme. One of the identified needs, sharing, did not have specific movement qualities, gestures, or postures derived from the interviews. Therefore, the dancers and I determined the way to express "sharing" by reflecting my experiences of interviews.

The phrases made by the dancers and I were combined or connected together to create longer phrases, and eventually became an approximately nine minute long dance piece. Dancers were often asked to describe their intentions in each created phrase and their body-felt experiences, thus I could make sure all dancers' expressions were accurately portraying

participants' experiences. The order of phrases in the piece followed the organization of identified themes. Music and sound for the piece was selected based on the congruency with the movement qualities in developed phrases.

Validity and Reliability: Validation Strategies.

Triangulation was utilized as one of the validation strategies in this study. Along with the two sections of interview data, verbal and movement, I wrote in a journal before and after each interview, as well as throughout the process of this study. This journal took an important role as epoche. The verbal data, movement data, and my journal as epoche were compared to each other throughout the process of analysis in order to create triangulation. This process allowed me to recognize and put aside my prejudgments toward the data.

Another validation strategy that I utilized was member checking. The member checking process was also considered as step five of the interview analysis, re-interview. It was conducted during each interview as well as after analysis via e-mail to finalize findings. During the interview, I asked questions back to participants to clarify my understanding. I mirrored participants' movements and asked them to correct me in order to achieve more accuracy in my embodiment. When the choreographic process was close to completion, I sent out a video of the choreographed piece with a written description, which included my understanding of the experience of infertility and the basic needs. Participants were asked to provide their feedback, and four out of five members replied. Unfortunately, I lost contact with one of the participants because of her relocation to a different state. All but one participant confirmed the accuracy of my interpretation of the data as well as expression in the dance piece. One participant pointed out that we overused the pelvic area to initiate movements, and she stated her experience was rather

felt in her chest and heart. This comment was integrated into the choreography by putting emphasis on shaping in the chest and torso.

Ethical Concerns

The main ethical concern in this study was the protection of participants' confidentiality and the potential emotional distress that they might experience. As this population holds a culture of secrecy, exposing participants' experience and identity in public could become a social and emotional risk to them. In order to protect their confidentiality, I excluded any personal information that could lead to their identification. Participants also had a chance to decide whether they allowed me to use their names and direct quotes in the writing during the consent process. Three of them agreed to use their actual names, and other two provided pseudonyms. Although they agreed, I omitted their names from my writing in order to ensure the protection of their personal information. All participants' information and data were discarded after submitting the thesis. I also explicitly encouraged all participants to seek external help or support as they needed. It was important for all participants to know that the interviews would not serve as therapy.

Additionally, I realized that respecting participants' physical conditions was important throughout the study process. At the time of the interviews, two of them were pregnant, and it limited their mobility. Also, I learned that some fertility treatments could cause certain physical conditions that required them to minimalize movements, or it could cause serious damage in their bodies. Since this study included movement components, I had to be very mindful and respectful of participants' physical conditions in order not to interfere with pregnancy or any fertility treatments that they were receiving at the time of interview.

The same general ethical concerns were applied when I worked with dancers. Although they had access to certain data, such as the list of themes or quotes in order to engage in the choreographic process, I did not shared any personal information that could lead to identification of participants. They were also asked to sign the form addressing the risk of emotional distress through embodiment (see Appendix F). Dancers were encouraged to seek external support as they needed as well.

Chapter IV: Results

This study was aimed to answer following the research questions: What are women's experiences of infertility and their medical treatments process? Through a body-mind integrated view, what are the needs of this population? At first, it was difficult for me to identify more generalized themes and needs because participants' emotional responses were slightly different from each other even though the majority of participants of this study went through similar or exactly the same protocol of treatments. Eventually, the data analysis process led me to grasp the phenomenon of infertility as a continuous process instead of a sum of every problem that infertile women may face. Findings from both verbal and movement data were integrated and constructed into a dance piece named *Reconnection*. It was performed in public on November 21, 2014, and this act was considered the last step of Kvale's analysis, the stage of action. The piece was videotaped by Mansfield TV, and it is available on <https://vimeo.com/112739755>

Findings from Verbal Data

Verbal data provided themes that describe the experience of infertility and the basic needs of women who participated in this study. I found that the phenomenon of infertility might cause participants to experience a disconnection from self/body. The disconnection seemed to happen in a progressive manner; participants went through phases of uncertainty and losing control (and/or desire to control) until they finally experienced disconnection. Waves of multiple emotions and secrecy/isolation were considered underlying experiences while participants went through the process of disconnection. Participants needed or wished to share their experiences with others, and they also wanted to reestablish positive relationships to self and their bodies. Their basic needs were to reconnect to those things that they lost in touch with through the experiences of infertility. Therefore, I determined the overall themes to be disconnection and

reconnection. The table 1 lists each identified theme and need found from verbal data. It also includes excerpts from interviews to support further understanding of these findings.

Table 1: Identified themes and needs: Disconnection and Reconnection

<Phenomenon of infertility>		Excerpts
The process of disconnection	Uncertainty / Unknown	"What's wrong with me?" "I don't know what that means." "I don't know if I can do this"
	Losing control / Desire to control	"I was trying to control, but all of a sudden she was not responding" "You are trying so hard, but things are just all over the place" "It's like you are inside of the tank. You can't navigate, operate and manipulate the tank."
	Disconnection from self & body	"I just felt like my body was my enemy" "It's almost kind of out of your body. You are almost not living in the same playing field" "You do care about your body, but you start hating it."
Underlying experiences	Wave of multiple emotions (Grief, anger, helplessness, shame, guilt, frustration, loneliness, etc.)	"I was pissed. I was angry at the world" "I was holding so much grief. It was too painful to release" "You can't control emotions" "I was infuriated, petrified...And absolutely ridiculous" "You feel lot of shame...and you feel guilty"

	<p>“Feel very lonely and very alone.”</p>
<p>Secrecy and Isolation</p>	<p>“It’s not safe to talk about it”</p> <p>“I didn’t tell whole a lot people about this even with my family”</p> <p>“I didn’t want to tell people. I didn’t want people to feel sorry for me. I didn’t want people to ask me lots of questions about it”</p>
<p><Identified Needs ></p>	<p>Excerpts</p>
<p>Needs of Sharing</p>	<p>"You just need somebody to listen."</p> <p>"Just getting out from my chest. For me it was release "</p> <p>"It’s nice to have someone who share the same experience and they get it"</p> <p>"Talking about it to other people was helpful"</p>
<p>Reconnecting to Self</p>	<p>"I want to connect to my foundation"</p> <p>"I want to be comfortable"</p> <p>"You have to accept it [yourself] and live in the peace"</p>
<p>Reconnection to others / environments</p>	<p>"Learning more people have the same problem, so it didn’t seem so scary".</p> <p>"Interdependent relationship allowed us to add flow through this process"</p> <p>"It's not like leaning into people. Its walking with them"</p>

Findings from Movement Data

Movement data informed how these identified themes and needs were manifested through participants' movements. Through my embodiment, I found some movements uncomfortable and others more conformable. Those uncomfortable movements seemed to be related to participants' struggles, and those comfortable movements seemed to be related to helpful acts that they did to fulfill their needs during the treatment process (see Table 2).

In relation to participants struggling experiences, bound flow, held breath, and occasional passive weight was observed in all participants' movements. They held tension in their chest, shoulders, lower stomach, arms, and back. Pressing, holding, and fist-making movements were repetitively observed in many participants. Also, there were moments when some of them presented increasing pressure and uncontrollable free flow. When they presented those movement qualities, they tended to stay in narrow kinespheres and linear movement pathways. When I embodied these movements and quality to elicit my kinesthetic empathy, I felt anxious, sad, and desperate to release tension. I also felt heavy in my chest as if someone was grabbing my heart. Corresponding images included being in a box, tunnel vision, wearing armor, and nails meant secure a tent continuously popping out.

In relation to helpful acts that participants did to fulfill their needs, free flow, breath, and grounding through the vertical dimension were observed. Some participants provided circular movements with free flow and breath. Many of them also presented grounding in the chair through feet or standing with emphasis on the vertical dimension. With these movements, their posture became more aligned and stable and use of their kinespheres expanded. Embodying these movements and qualities made me feel strong, confident, and relaxed all at the same time. Corresponding imagery included opening the box or door, and walking with someone side by

side. The table 2 lists all salient movements, corresponding imageries, and insights gained from my kinesthetic empathy discussed above.

Table 2: Findings from movement data

Salient Movement Qualities		Imagery	My Kinesthetic Empathy
Uncomfortable movements	<ul style="list-style-type: none"> • Bound flow • Held breath • Passive weight / numbness • Held tension in identified body parts • Increasing pressure • Pressing / holding gestures • Punching / squeezing fisting gestures • Narrow kinesphere / use of pathway • Uncontrollable free flow 	<ul style="list-style-type: none"> • Being the box • Wearing armor • Tunnel vision • Nails meant secure a tent keep popping out 	<ul style="list-style-type: none"> • Sad / tearful • Frustrating • Anxious • Desperate for release • Suffocated • Heavy in my chest
comfortable movements	<ul style="list-style-type: none"> • Circular movements • Free flow • Emphasis on vertical dimension • Grounding / yielding through lower body • Aligned and stable postures • Expansion of kinesphere • Release in breath 	<ul style="list-style-type: none"> • Opening the box • Opening the door • Walking with someone side by side 	<ul style="list-style-type: none"> • Relaxed • Confident • Comfortable • Released • Feeling strong

Conclusion: Performance as the Presentation of Findings

On November 21, 2014, the dance piece titled *Reconnection* was performed as a presentation of findings at the annual concert of the Masters Organization Volunteering &

Educating in Dance/Movement Therapy (MOVED) at Hamlin Park Field House Theater. I decided to incorporate a performance as the presentation of findings, not only to show the study results, but also to speak through my body on behalf of the women who participated in this study. This helped fulfill one of the goals of this study, which was to give a voice to the women who experience infertility. In addition, my strong belief in art's ability to empower people led me to present a dance piece as a public performance.

The first half of the dance piece portrayed participants' experiences of infertility treatments. The second half of the dance piece portrayed their identified needs. Sections included in the dance piece followed the order listed in Table 3. The movement qualities included within each section are also included. Details of relationship between verbal and movement data and how dancers and I portrayed the findings will be described in the discussion chapter.

Table 3: Integration of verbal and movement data / Organization of the dance piece

Identified Themes (Verbal data)	Movement and qualities (Movement data)
<The Phenomenon of Infertility >	
Section 1: Uncertainty / Unknown (Walking in straight line)	<ul style="list-style-type: none"> • Bound flow • Narrow pathway • Held tensions in identified body part • Image of tunnel vision
Section: 2 Losing control / Desire to control (Each dancers move differently)	<ul style="list-style-type: none"> • Bound flow • Narrow kinesphere • Held breath • Image of nails keep popping out

Section 3: Disconnection (Two dancers ignoring each other)	<ul style="list-style-type: none"> • Punching / squeezing fist • Passive weight /numbness • Image of being a box or wearing an armor
Section 4: Wave of multiple emotions (Two dancers running in from the corners)	<ul style="list-style-type: none"> • Uncontrollable free flow • Abrupt bound flow • Increasing pressure
Section 4: Secrecy (Two dancers sitting on the floor)	<ul style="list-style-type: none"> • Bound flow • Holding gesture • Held breath
<Identified Needs >	
Section 5:Needs of sharing (Mirroring movements, creating a circle)	<ul style="list-style-type: none"> • Mirroring
Section 6: (Re)Connecting to Self (Walking, standing straight)	<ul style="list-style-type: none"> • Grounding/yielding, • Emphasis in vertical dimension • Aligned and stable posture • Image of opening the box or door
Section 7: (Re)Connection to others /environment (Finding partner, unison movements, walking together)	<ul style="list-style-type: none"> • Circular movements • Free flow • Expansion of kinesphere • Release in breath • Image of walking with someone side by side

It has to be noted that the performance did not end the way I intended. The music and lighting were faded out earlier than planned. Therefore, the performance does not include an actual ending. The actual ending was supposed to be dancers and me traveling backward with clear intention toward the center of our bodies, then making active eye contact with each other. Finally, all of us walking forward in complete unison.

Although the performance itself did not end the way I planned, feedback from the audience and participants confirmed that the piece portrayed the experience of infertility as it was expressed by the participants in this study. Some audience members made comments about how intense it was to watch the piece because they could feel dancers' held tension and struggles. Some participants were able to watch the performance. One reported that the piece captured the essence of her journey of infertility accurately, and another stated "it was [emotionally] hard to watch, but very validating."

Chapter V: Discussion

The study results showed that this particular group of women experienced similar emotions and difficulties to the results in other studies, such as grief, anger, and isolation (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lee. S, et al., 2010; Lerner, 2006; Lykeridou et al., 2009; Nelson et al., 2008). However, listing those struggles did not provide me with a larger picture of the phenomenon. In order to be able to understand the basic needs of this population, I needed to have a more comprehensive understanding, as opposed to trying to address every problem that infertile women face.

During the analysis, I started to realize that all participants presented their experiences as a step-by-step journey they took. Therefore, I tried to grasp the phenomenon of infertility as one whole progressive process, instead of focusing on every detail of the women's psychosocial struggles. Once I started to see the experience of infertility as one continuous process, I started to notice a series of phases that participants went through to eventually experience disconnection from self, their bodies and others. In addition, the body-mind perspective helped me discover how women's experiences of the disconnection from self and others might manifest through their movements, and it led me to gain a body-mind integrated understanding of the experience of infertility.

Body-mind Integrated Understanding of the Experience of Infertility

Women's emotional responses to their journey of infertility may vary in each person. Yet in this study, I noticed that every participant mentioned losing connection to self, people around them, and their environment in their treatment process. The process of disconnection seemed to

happen gradually, and the intensity of emotional waves increased as they went through longer treatments and repetitive unsuccessful results.

While trying to find connection between what participants verbally shared and physically presented through their movements, I had a hard time finding cohesiveness between these two aspects of the data. Then, I came to think that the process of disconnection might have been manifested through incongruence between the body and mind. Perhaps, there might have been a mismatch between how participants felt inside and how their body presented their stories through movements. For instance, participants reported intensity and complexity of their emotional experiences, which made me anticipate seeing more variety in their movements. However, unlike their chaotic emotional ups and downs, their bodies seemed to be stuck in bound flow, which represents a restrained or controlled movement quality (Moore, 2009). I found that bound flow arose in almost every theme that described the phenomenon of infertility, even though each theme had different movements and gestures to represent it. Maintaining one particular movement quality throughout the process seemed to be incongruent from their complicated emotional journey.

I actively used embodiment and kinesthetic empathy to verify my interpretation of the process of disconnection and its possible relation to body-mind incongruence. In my body, bound flow felt containing, yet it also felt like I was suppressing some emotions that were about to explode. Based on my kinesthetic empathy, I thought that participants might have been physically binding their flow in order to contain the chaotic emotions inside and/or try to gain sense of control. Furthermore, some participants stated that they started to perceive or feel their body and mind as different entities. As an extended experience of feeling incongruent between the body and mind, participants might have developed a body-mind split; that is to say, a

condition under which reciprocal or bidirectional interactions between body and mind to maintain healthy body-mind connection are inhibited. The following section will review details of the process of disconnection and the body-mind split, and how they were represented in the dance piece in order to provide insight into the phenomenon of infertility.

The process of disconnection and body-mind split. The process of losing body-mind connection does not happen instantaneously; the participants seemed to follow similar developmental phases that led them to the disconnection (see Table 3). The first phase is uncertainty, which seemed to be experienced at early stages of the process of infertility treatments. Some were surprised by their diagnosis of infertility, and others were not, depending on their prior knowledge about their physical condition. Yet they all seemed to face confusion and fear about jumping into the process of treatment, which was unknown. Most participants claimed that not every clinician gave them enough information about the protocol or possible impact of treatments, which made them feel like they were “dumped in the process.” Inconclusive testing results often made them feel frustrated. Not understanding clear reasons for the diagnosis might fuel their uncertainty toward the treatment process. Sometimes, the protocol seemed to be too emotionally and psychically intense, and some of the participants felt nervous and questioned if they were ready or had strength to endure the treatments.

In the dance piece, the phase of uncertainty was mainly expressed through a use of linear movement pathways because participants often presented gestures that traveled only in one direction in a relation to this phase. Linear movement pathways were also connected to the image of “tunnel vision,” which explained how narrowing and obsessed participants felt about their treatment at first. Some perceived the infertility as a pathway that they had to go through without seeing the clear way out. Bound flow and held tension in specific body parts were incorporated

in movements in this section. When the dancers and I embodied this phase, bound flow made us internally preoccupied as if we were trying to hide or control how uncertain we felt inside by holding tension on the surface of our bodies. This preoccupation resulted in us emphasizing the use of linear movement pathways even more; the dancers and I walked in straight lines without noticing any surroundings including other dancers.

Uncertainty eventually created an obsession with gathering information though excessive research because participants wanted to feel in control by preparing themselves for treatments with knowledge. They also became obsessive about trying all available treatment options and following their protocols perfectly. However, as much as they wanted to be in control, they lost control over themselves and their surroundings. When they started to realize that their bodies were not working the way they thought they would be or supposed to be, they felt they lost control over their bodies. One participant provided a vivid image of nails that were supposed to secure a tent, but the nails kept popping out from the ground. She felt everything was all over the place; she was frustrated because once she gained control over one aspect of her issues in treatment, another issue would emerge over which she did not have control. In addition, some clinical treatment processes, which they were not in full control of, felt “violating” for some of the participants. They went through numerous procedures of testing, medication, and shots. In some treatments, they had to insert tubes into their bodies. These experiences made them feel like they were scientific experimental subjects or “guinea pigs” that clinicians could manipulate. As much as they did not have control over their bodies or treatment processes, they had strong desires to gain a sense of control.

Incongruence and separation between body and mind might become more apparent in the phase of losing control and desire to control. Although participants felt out of control inside,

what they presented through movement was excessive bound flow. Because of excessive bound flow, their kinesphere and use of breath became limited. When the dancers and I embodied this theme in the choreography, it felt like we were trying to maintain balance, which reminded me that some participants said that they were trying to “hold it together” during treatment processes. Due to feeling extremely chaotic inside, participants might increase bound flow and unconsciously try to contain their emotions by control their bodies because they wanted to maintain some sense of connection to self through control.

As a result of feeling out of control, participants felt their bodies betrayed them and became their enemy, which they hated or fought against; eventually they developed disconnection to self/body. One said she felt like wearing armor that was not a part of her, and another provided the image of being trapped in a box where she tried everything to get out. Both of these images explained how they felt like their bodies were not part of them anymore. A participant had an intense experience of disconnection and she explained it as an “out of body” experience; she felt like she was observing her body being manipulated through the process from outside of her body. Perhaps, their bod-mind connection might have been disturbed; their bodies and minds were not responding to each other, thus they developed the body-mind split. Furthermore, some claimed that they were afraid to connect to self and their bodies because they would feel too vulnerable to maintain their emotional sanity. Participants seemed to develop the state of disconnection from self as a means of coping to avoid emotional breakdown.

The phase of disconnection was portrayed by two dancers presenting different movements in the dance piece based on participants’ gestures and movement qualities I observed when they talked about disconnection in interviews. In gestures, I observed punching or making a fist in relation to their frustration toward a conflict between their body and mind. I also

observed passive weight, which looked numb and emotionless. When participants reached this phase, they did not seem to have energy to maintain or pay attention to the status of their body-mind connection anymore. In the dance piece, one dancer ran around another dancer making fist gestures. They were asked not to acknowledge each other, which represented the body-mind split. In order to achieve passive weight and numbness, the dancers and I supposed that they might have to go through excessive bound flow until they could not hold any longer. When the bound flow exceeded dancers' tolerance, they dropped flow and became passive, numb, and emotionless. This embodiment experience made me think that giving up the bound flow, which participants might use to cope with struggles, might be the trigger to the disconnection from self/body.

While participants went through the progression to disconnection from self/body, they constantly experienced waves of multiple emotions. The participants reported many of the emotions that were also discussed in literature, such as grief, anger, hopelessness, self-doubt, shame, anxiety, sadness, and many more (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lee, S, et al., 2010; Lerner, 2006; Lykeridou et al., 2009; Nelson et al., 2008). Yet, in this study, I perceived those emotions as underlying factors throughout the entire process because participants explained that those emotions tended to come and go like repetitive waves. This seemed to be related to repetitive treatment processes. Participants tended to repeat the same treatment at least several times. Every time they menstruated, which indicated unsuccessful treatment, they would go through all negative emotions over and over. Over time, the intensity of waves of emotions might have increased.

Secrecy was another factor that loomed over the process; it seemed to fuel the disconnection to self and accelerate the disconnection from others. This result fully supported the

literature describing women's social isolation during infertility treatment (Berger et al, 2013; Kirca & Pasinlioglu, 2013). Participants often chose not to share their treatment process with others, even family members and close friends, because they felt unsafe to do so. One of the reasons was their fear of social judgment and insensitive comments that they were anticipating to get from others. Getting advice or comments, such as "just relax" or "try a different diet" from others only made them feel unheard or misunderstood. They also thought sharing the treatment process with others would put pressure on them to be successful. Since they did not know the outcomes of their treatment, some of them chose not to report it to others until they successfully carried the pregnancy for a while. Secrecy also seemed to be the way to cover up waves of emotions for participants. No matter how chaotic they were feeling inside, they acted like nothing happened and kept moving forward.

Themes of waves of emotions and secrecy were expressed simultaneously in the dance piece because both themes were underlying factors of the phenomenon. During interviews, I observed abrupt shifts in movements and flow when participants expressed overwhelming emotions, such as grief and anger. Some cried, shook, or leaned forward suddenly with free flow, which looked almost uncontrollable, but they returned to bound flow quickly and used increasing pressure to contain their body to continue talking. Participants expressed secrecy through more concrete gestures, such as holding their mouths, chests, and necks. In the dance piece, two dancers utilized abrupt shifts in flow and increasing pressure to represent waves of emotions. Two other dancers, who represented secrecy, embodied holding gestures while trying to ignore what was happening around them. Contrasting these two themes expressed experiences of disconnection and body-mind split even further because two groups of dancers represented participants' incongruence between what they felt inside and how they acted in front of others.

Identified Needs

Although participants held secrecy and did not chose to share their process with others much, sharing was the most prominent need that all participants reported. Specifically, they wanted to share their stories with someone or a group of people who had similar experiences. In addition, participants mentioned the need and desire to achieve self-acceptance, reconnect to their bodies, and reconnect to others. In addition, through my embodiment process, I recognized the need for releasing tension; if they were holding bound flow throughout the process of infertility, it may be beneficial for them to relax their bodies. The following section will review each identified need and how it was portrayed in the dance piece to reveal how I came to identify these needs.

Sharing and reconnection. As in the literature about social isolation in this population (Berger et al, 2013; Kirca & Pasinlioglu, 2013), participants of this study also found it hard to put themselves in a social community; however, all of them reported that they had high desire to be heard and understood by others. In order to meet this need, many participants joined support groups, where they could find women who went thorough similar experiences. Support groups were places where they could share their stories without facing social stigma and gather information from others' experiences. A participant stated that being able to share was “such a release.”

The process of sharing, specifically telling their own story, seemed to help some participants achieve self-acceptance. A participant shared her story on her blog as well as in her support group, and she stated that telling her story had been helpful for her to accept and feel comfortable about herself. Another participant stated that she found “a closure” to her past experiences through the interview process. Perhaps, sharing their own stories through interview

might provide experiences of catharsis; having someone who just listened to their full stories without intruding might have been therapeutic for many participants.

In the dance piece, the need of sharing was expressed through mirroring. After interviews, I realized that this study's interview process itself met participants' need of sharing. By telling stories and showing movements that represented their experiences, participants were able to fulfill their desires to be heard. Moreover, my embodiment through mirroring made them feel validated and understood non-verbally. Therefore, the dancers and I decided to repeat movements that represented the waves of emotions and mirror each other in the dance piece. In order to mirror each other, we had to slow down movements, and this ultimately made us feel calm and grounded. In addition, mirroring allowed me to see my own movements in others' bodies, which helped me gain an objective view on how those emotions affected me personally.

Another need, connecting to self and to their body, surfaced, and participants found different ways to meet their needs, such as engaging in self-care or self-compassion. A participant, who finished her treatment prior to the interview, stated that she still wanted to find the way to reestablish a positive relationship with her body. Another participants stated that she wanted to learn how to let go her obsession and be kind to herself, so that she could "find peace" in where she was at no matter what treatment results were. Once they lost trust in their bodies, raising body awareness, paying attention, and accepting the status of their bodies seemed to take emotional courage. Some participants tried to connect to herself by engaging in self-care, which helped her feel strong. Self-care varied in each participant; for instance, one walked miles and another tried to find humor in her treatment process. All forms of self-care and self-compassion seemed to lead them to pay attention to the status of their body-mind connection, which they

could not maintain while the treatment process was taking over their lives. Re-recognizing their body-mind connection allowed them to access their internal strength.

Participants needed to recognize their internal strength to help reconnect to self and body. This strength was expressed through strong vertical movements in the dance piece. During interviews, many participants expressed a need to find an internal strength in order to connect to self. To express their internal strength, some participants showed me straight aligned postures; for example, they stood tall or sat with a straight back. Some of them also stated they wanted to feel grounded into the floor in order to feel strong. Therefore, I created movements within the dance piece that emphasized the vertical dimension that represented participants' internal strength to express what helped them connect to self and body in the dance piece. The dancers and I were standing straight, and their arms and legs traced vertical dimension. Standing straight naturally allowed us to increase pressure through our feet to yield into the floor. Yielding helped us feel secure and stable in our bodies, so that our gaze became wider. After staying in narrow focus for a long time because of the excessive use of bound flow, it felt relieving to be able to see surrounding including other dancers finally. This reminded me the image of opening the box. This image had arisen when a participant wanted to open the box that she felt like she was trapped in. By feeling secure and stable through grounding, we also began to release tension, which was one of the needs mentioned by participants, as well.

In order to overcome struggles during their infertility journeys, participants also needed to reach out to others and accept positive support. Besides support groups, participants found support from their partners and other women who went through the process with them. Participants reported an importance of "having an interdependent relationship" with their partners. Perhaps, becoming pregnant requires partners' contributions; sharing and carrying the

burden of infertility together with their partners helped some participants reduce their stress, and made the treatment process seem less scary. A participant reconnected to her old friend who happened to be going through the exact same treatment process at the exact same time as her. This relationship was more special than relationships that she found in the support group because they were going through the same treatment simultaneously. Some participants explained what they wanted was someone who could walk with them side by side; they were not looking for someone to lean on, but they wanted to someone who could embrace the experience of infertility together.

In the choreographic process, the dancers and I examined the need of connecting to others through embodying circular movements that some participants provided during interviews. In the interview, a participant created circles with her arms in front of her body and explained that it represented how she opened up to people and accepted people into her life at the same time. Once she engaged in this movement, her kinesphere expanded with deeper breath and free flow. When the dancers and I embodied circular movements to create the dance piece, we noticed the importance of grounding, which we found through the previous section of connecting to self and body. Having stability in our bodies was essential to having a larger kinesphere and access to free flow. Thus, I came to believe that reconnecting to self and body was necessary in order to feel comfortable enough to reach out to others.

In addition, the performance experience made me truly understand how impactful it could be to share the same experience with others to overcome hardship. As was mentioned, the performance of the dance piece did not end as the way I planned. I could not believe what happened, and I felt ashamed that the performance did not end as planned. However, knowing that the dancers went through the same experience right next to me helped me calm down

quickly and accept reality. Perhaps, this unexpected experience made me truly understand the participants' experience of failing, the power of embodiment, and the importance of having group support.

Suggested DMT Interventions

The choreographic process and my embodiment not only synthesized the data, but also provided inspiration for developing possible DMT interventions that may be beneficial for this population. Based upon participants' self-report of their needs and my embodied experience of trying on their movements, I identified some DMT interventions that may support women undergoing infertility. Because gaining support from others was necessary for participants, I believe it is more effective to use these interventions I explain below in a group therapy setting. Yet, depending on how vulnerable the actual clients are, therapists could also begin with or concurrently engaging in individual. These DMT interventions aim to address both psychosocial and physical needs to provide a body-mind integrated support to infertile women.

Psychosocial and movement goals. In order to provide body-mind integrated support through DMT interventions, it is important to establish psychosocial goals and corresponding movement goals. Based on participants' self-reports, reconnecting to self and achieving self-acceptance are suggested as overall psychosocial goals for group of women undergoing infertility. In order to achieve the overall goals, they may also need to develop coping skills, release emotions in a safe environment, and gain positive support from the community.

Corresponding overall movement goals would be increasing body awareness and one's connection to their body. More specifically, they may need to learn how to increase their sense of grounding, connect to breath, and release tension. Clients would be encouraged to learn how to show or accept support in community through movements.

DMT Interventions. These movement goals may be achieved by engaging in following DMT interventions: engaging in grounding exercise, leaning breathing techniques, gaining free flow, and embodying their feelings and/or each other's movements. These ideas are highly influenced by information that I gained through embodying participants' movements. Also, I intentionally utilized my body-felt experiences to guide the process of identifying interventions that could potentially benefit women undergoing infertility treatments.

Providing exercises that address grounding is suggested to begin the session in order to facilitate the development of coping skills. I believe coping skills need to be developed in the early stages of the therapy process because it prepares clients for deeper emotional experiences, which may become overwhelming for them. Through embodiment, I found that grounding allows the body to feel relaxed and comfortable, and it also made me feel ready to explore different movements. Utilizing movements that put emphasis on the vertical dimension can be used to foster grounding in clients' body. This may enable clients to access increasing pressure and to yield into the floor. For instance, movements, such as reaching to the ceiling and stomping through feet can be used as grounding exercises.

Introducing breathing techniques is another way to facilitate the development of coping skills. When I embodied the excessive bound flow that I observed in participants, I often caught myself not breathing. Once I reminded myself to breathe more deeply, it usually helped me calm down and release physical tension. Also, breathing can heighten clients' awareness to the core of their bodies because breath enhances and changes shaping in their chests and abdominals (Bartenieff, 1980). Thus, it can help clients increase their body awareness. Breathing should be practiced along with other movement activities, including grounding, since movements flow better when they ride on the breath (Bartenieff, 1980). Perhaps clients may be encouraged to

inhale as they reach to the ceiling and exhale as they drop their arms. They can also try to breathe with the rhythm of stomping feet.

To facilitate safe emotional release, clients may be encouraged to learn how to gain access to free flow without losing a sense of control and grounding. In my body, holding excessive bound flow felt like I was trying to suppress intense emotions and/or control my body. This led me to think that bound flow might have been a result of participants' suppressed emotions and desire to gain a sense of control over their bodies. Therefore, I believe that gaining access to free flow may feel recuperative for clients, and it could facilitate release of emotions. However, it may be challenging for some to gain free flow while maintaining a sense of grounding because bound flow and active weight may be related closely in some people's movements. During the study, excessive use of bound flow was usually observed along with increasing pressure in participants' bodies. In addition, when the dancers and I tried to eliminate bound flow from our movements, we became passive, which ultimately enhanced the body-mind split experience in dancers and me. What helped dancers and I regain a sense of grounding was engaging in rhythmic music. The music with steady rhythm fostered consistency and stability in our movements, and it helped us move bigger with more free flow and active breath engagement. Establishing sense of stability and moving with free flow simultaneously may help clients feel secure and safe while they express their emotions.

Through group movement experiences, clients can learn how to show and accept support non-verbally, which not only facilitates the development of community support, but also can enhance safe emotional expressions. Mirroring and embodiment their feelings and/or each other's movements are suggested to enhance a sharing experience, which participants needed the most. The mover can share her story, and others can validate and understand the story through

mirroring. Through this process, clients may find universality in the group; clients may feel they are a part of community where everyone shares something in common (Yalom, 2005). The sense of universality may allow them to feel even safer to express their emotions (Yalom, 2005). Mirroring and embodiment also facilitates kinesthetic empathy, or understanding each other's body-felt experiences (Parviainen, 2003). Comparing and noticing similarity or differences in others' body-felt experiences through kinesthetic empathy may help clients to pay attention to their own bodies; thus, kinesthetic empathy can help them increase body awareness. In DMT, mirroring is often utilized to facilitate the therapeutic relationship between clients and therapists (Levy, 2005). Similar to this, I believe that clients can develop positive and therapeutic relationships between each other through embodiment and mirroring as well.

While facilitating these interventions, the use of imagery is recommended to promote movement. During interviews, I noticed that participants had an easier time verbalizing their feelings with images first in order to create movements. Once they lost trust and connection to their bodies, it might have been difficult for them to engage in movements through their bodies right away. I believe that the use of imagery can promote movement and reestablishing the body-mind connection gradually and safely. These DMT interventions could facilitate finding comfort in one's body, and I believe that feeling comfortable in one's body can help women with infertility achieve self-acceptance.

Over and above providing interventions, it is important to mention that DMT has the unique ability to create a space where women can feel comfortable and safe to connect to their bodies and minds. As I experienced during interviews, it seemed to be very impactful in participants' experiences when I cognitively and psychically attending to them by actively listening and embodying their movements. Attuning to participants helped create a sense of trust

and understanding between us instantaneously; thus, they could reveal their vulnerable stories without feeling insecure. They might have even felt less fearful to connect to their bodies through movements for the same reason. I strongly believe that DMT's unique body-mind based approach allowed me to provide a safe environment for participants to share their stories and fulfil their needs to be heard. In order to successfully facilitate DMT interventions to benefit women with infertility, providing a safe space needs to be promoted continuously.

Importance of therapists' awareness of medical treatments. To provide proper and safe movement interventions, therapists are required to have knowledge of the medical treatment process as well as respect for clients' physical status. Some medical procedures cause certain physical conditions that limit clients' movements. For instance, excessive movements can cause severe damage in women's ovaries if they are hyper-ovulating because of fertility-enhancing drugs. Infertile women tend to become very sensitive about how they use their bodies right after IUI or IVF treatment; they may not want to bother their lower stomach area because they do not want to disturb the embryo's implantation activities. Therapy sessions must provide support for their needs but should not interfere with any medical protocols.

Limitations of This Study

I successfully recruited participants who were in different stages of the treatment process in order to gain a broader understanding of the phenomenon, yet some similarities that participants shared might become limitations of the study. For instance, some participants attended the same support group, and they seemed to share similar views on infertility. Each support group may have different beliefs that influence their viewpoints. Since I only connected to two support groups, participants opinions might have been narrowed based on their support group experiences.

Another similarity participants shared was their ethnicity and social class background. Although I was open to have women from all ethnicities and classes, all participants were Caucasian with an established career and had a partner who could contribute to their socio-economic status. The financial situation, such as access to insurance, could affect the treatment. Financial stress could cause another layer of psychological distress such as anxiety (Berger et al., 2013; Kirca & Pasinlioglu, 2013), but for majority of participants, this was not the main struggle that they mentioned in this study.

Interestingly, the majority of participants were comfortable expressing their experiences through movement. This made this study's process easier, but at the same time it limited the data to women who are not resistant to movement. Many participants had an interest in the body-mind connection even before they participated in this study; some of them held careers in fields somewhat related to physical activities, such as Pilates, fitness, and theater arts. They explicitly stated their interest in the body-mind connection, and they presented great body awareness. However, they stated that there were some women, who also struggled with infertility, who would not feel comfortable moving at all because their lack of experience in physical activities. In addition, some of participants were pregnant at the time of interview, and they told me their expressivity and movement ranges were limited because of their low comfort level in their bodies.

Recommendations for Further Research

Infertility and other psychological disorders. As in the literature, this study confirmed the negative impact of the experience of loss (Berger et al., 2013; Greil et al., 2011; Kirca & Pasinlioglu, 2013; Klemetti et al., 2010; Lee. S, et al., 2010). I also noticed that experiences of loss or failure seemed to make a difference in how participants perceived their infertility journey.

Participants who had multiple miscarriages said that the treatment process was traumatic, and they were struggling with psychological pain even at the time of interview. Considering several symptoms that some participants reported in interviews, I wonder if there is any relationship between infertile experiences and some psychological disorders that were not discussed in current literature.

During the interviews, some of the participants reported behaviors and experiences that represented their struggles even after the treatment process. For instance, several participants started crying in the middle of the interview while they were talking about the loss as if they were re-experiencing it through their stories. One participant stated that her emotional pain was “still here” even a year after the experience of loss. Another participant reported that she actively avoided situations or places where she anticipated seeing babies or children because they were emotionally triggering for her. Also, one participant who reported localized memory loss; she could not remember the details of her first miscarriage experience. She explained that part of her memory was missing, “like a blank.”

Although I did not find enough evidence to claim participants’ experiences as indicators of psychological disorders, those experiences could be explained as symptoms of PTSD or dissociative disorders (Morrison, 2006). Current studies are focusing on mood disorders and anxiety disorders in a relation to infertility (Faramarzi, et al. 2013; Kirca & Pasinlioglu, 2013; Klemette, et al., 2010; Koszycki et al, 2012; Lykeridou et al., 2009; Ramezanzadeh, et al., 2010). To expand the research around infertility, investigating relationships between infertility, trauma, PTSD, and dissociative disorders may provide further understanding of the impact the experience of infertility has on women’s lives. I am especially curious about the possible relationship between dissociation and the body-mind split since these concepts seem to relate.

Timing of the interventions. Determining the most appropriate timing of an intervention is an important question to ask, yet I was not able to find an answer through this study. Educational or prevention work may be needed since almost all participants stated that they wished to have proper knowledge about their conditions and treatment processes before they stepped into their journeys. When they assumed they did not have any fertility issues, the diagnosis seemed to be more shocking. Also, some complained about a lack of explanations through the treatment process. Doctors might not provide enough information about psychological side effects. In addition, if PTSD or other psychological disorders are experienced by women after the medical treatments, it is also suggested to provide some psychological support after each treatment. I believe the needs of these women changes over time.

In order to fulfill all needs, before, during, and after treatments, further studies need to be conducted to determine when and what kind of interventions those women need. In future studies, it is recommended to recruit women in different stages of their journeys of infertility to collect data in order to reveal changes of their basic needs. Also, incorporating diagnostic testing may help reveal relationships between experiences of infertility and psychological disorders, such as PTSD or dissociative disorders, which had not been investigated before. This may help future researchers to invent the most effective clinical approach or framework to this population. In addition, providing pilot DMT sessions to women with infertility is highly recommended in order to investigate DMT's efficacy on treating this particular population.

Conclusion

Currently, infertility is understood as a medical condition that affects women's psychosocial well-being greatly; the phenomenon of infertility can cause emotional distress, such as anxiety, depression, grief, and anger (Berger et al., 2013; Greil et al., 2011; Kirca &

Pasinlioglu, 2013; Klemetti et al., 2010; Lee. S, et al., 2010; Lerner, 2006; Lykeridou et al., 2009; Nelson et al., 2008). Meanwhile, DMT has been utilized in the medical field and proven its benefits and ability to provide holistic support (Debbel-Hope, 2000; Goodill, 2005; Serlin et al., 2000; Sandal, 2005). When I encountered this topic, I could not stop wondering about the potential positive contributions of DMT with this particular population.

This study challenged past literature by aiming to reveal a body-mind integrated view of this phenomenon. In order to do so, two research questions were established: What are women's experiences of infertility and their medical treatments process? Through a body-mind integrated view, what are the needs of this population? I employed a body-mind perspective to answer these questions; the movement interview, my embodiment, and choreography were employed in addition to the verbal interview. My embodiment and choreography helped me perceive how participants' experience of infertility and their basic needs may be manifested through their bodies. Moreover, embodiment promoted deeper understanding of participants' bodily-felt experiences through my kinesthetic empathy. I believe the verbal interview alone would have not been able to reveal an unique relationship of body and mind that participants experienced during the infertility treatments.

The results showed that infertile women experienced the disconnection from self/body, which might be manifested through a body-mind split. The process of disconnection seemed to happen gradually, following the phases of uncertainty and losing control/desire to control. Throughout the process, participants hid their emotional waves to protect themselves from social embarrassment and stigmatization, yet secrecy and isolation only promoted further disconnection from self/body as well as others. What they wanted was to share their experiences with someone or with a group of people who could embrace their experiences together. In addition, participants

mentioned the need and desire to achieve self-acceptance, reconnect to their bodies, and reconnect to others.

I believe that DMT has the potential to benefit this population due to its ability to address clients' both physical and psychological needs (Ginsburgs & Goodill, 2009). Infertile women experience disconnection from self and a body-mind split, which lead them to feel isolated as well. Therefore, highlighting the body-mind connection through DMT interventions may help them rediscover or strengthen their body-mind connection to cope through this difficult time in their lives. This study presented DMT interventions that were created based on identified needs from the data and information I gained from my kinesthetic empathy. However, it was not this study's intention to prove its efficacy; therefore, further research on efficacy of DMT on this population is recommended.

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Appendix A: Definition of Key Terms

Body-mind connection: in the field of dance/movement therapy, the human body and mind are believed to have reciprocal or bidirectional influence on each other; thus, change in the body can cause change in the mind, and vice versa (Goodill, 2005; Levy, 2005). This integration and interaction between aspects of human functioning typically considered of the mind and those typically considered of the body is referred to as the body-mind connection (Goodill, 2005, p 22). Body represents “functions of the body encompass [that] physiologic, kinesiology, neurologic, hormonal and immunologic system” (Goodill, 2005). Similarly, mind represents “thinking, communication, intentional behavior, beliefs, relationships, social processes, and expression of emotions” (Goodill, 2005).

Body-mind incongruence: a mismatch between how one feels inside (emotional experiences) and how one presents oneself through movements or behaviors (physical expressions or responses).

Body-mind perspective: Based on a DMT principle that “the body and the mind are inseparable” (Levy, 2005. p1), the human body and mind are believed to have reciprocal or bidirectional influence on each other; thus, change in the body can cause change in the mind, and vice versa (Goodill, 2005; Levey, 2005). This body-mind approach allow people to perceive an individual as whole, rather than a sum of parts (Goodill, 2005), thus creates holistic view on an individual or the phenomenon that is experienced by an individual.

Body-mind split: when reciprocal or bidirectional interactions between body and mind are inhibited. In these cases one may perceive or feel their body and mind as different entities.

Bound flow: one of the motion factors that explain a quality of movements in LMA, represents restrained or controlled movement quality. Movements with bound flow may appear restricted or even tensed (Moore, 2009).

Embodiment: goes beyond recreating someone's movement in one's own body, and requires "active sensing of bodily sensation, impulse and affect" (Carroll, 2011, p. 251). Embodiment is often used in DMT session as a mean of mirroring client through which the therapist aims to gain kinesthetic empathy (Levy, 2005).

Flow: one of the effort elements in LMA, which explains a quality of movements in regard to a range of control. Free varies in between bound flow and free flow (Moore, 2009).

Free flow: one of the motion factors that explain a quality of movements in LMA, represents movements that are relaxed or difficult to stop. Movements with free flow may appear easy going and fluent, yet they may appear uncontrollable in extent (Moore, 2009).

Increasing pressure: one of the motion factors that explain a quality of movements in LMA, represents movements that requires forcefulness and firm pressure. Movement with increasing pressure requires muscular tension.

Infertility: a medical condition that is "defined by the failure to achieve a successful pregnancy" (ASRM, 2013, para.1). Diagnostic criteria include inability to conceive after about 12 months of unprotected intercourse and/or the inability to carry a pregnancy to delivery (ASRM, 2013).

Kinesphere: the space around the body as a territory" (Moore, 2009, p. 111) or a personal space which defined by one's range of motion in his/her body (Moore, 2009).

Kinesthetic empathy: refers to the act of “re-living and an epistemological placing of us ‘inside’ the other’s kinesthetic experience” (p. 161). Through finding knowledge of others bodily movements, kinesthetic empathy acts make it possible for people to understand others non-verbal or body-felt experiences (Parviainen, 2003). In this study, kinesthetic empathy was evoked through the researcher’s embodiment of participants movements.

Laban Movement Analysis (LMA): a system and tool to breakdown, describe, notate, and reconstruct movements. This system include four categories: Body, Effort, Space, and Shape (Moore, 2009). In this study, Effort was used to describe qualities of movements and Space was used to explain directions or special pathway that movements took.

Mirroring: refers to recreating or reflecting someone’s movements in one’s body (Levy, 2005).

Passive weight: Quality of movements without active use of muscular tension is referred as passive weight in this study. Movements with passive weight may appear numb, effortless, and emotionless.

The vertical dimension: an LMA term that explains the direction of movements or how one orient his/her body in the space. The vertical dimension represent direction of up and down (Moore. 2009).

Appendix B: Invitation Letter Sent via E-mail

Greetings,

My name is Sara Ogawa and I am a graduate student in the Dance/Movement Therapy and Counseling program at Columbia College Chicago. I write to extend a warm invitation to participate in my emerging research study exploring the phenomenon of infertility. You're being invited to participate because you may have experiences receiving diagnosis of infertility or medical fertility treatment

The purpose of this research study is to understand the experience of infertility in order to assess needs for psychological support of those who struggle with fertility medical treatment process. The potential benefit of dance/movement therapy (DMT) will be explored once these needs are identified. Through this study, I hope to establish DMT interventions which will contribute to expansion of treatment option and integration of psychological support with medical treatment.

In order to participate in this study, you must first self-identify as individual who matches following criteria:

- Female individual who is over eighteen year old
- Female individual who has been diagnosed as infertile
- Female individual who has **current or past** experiences receiving medical treatments for infertility.
- Female Individual whose own physical condition results her infertility

If you self-identify with the above qualifiers, and remain interested in participating in this study, please refer to the attached informed consent form for further details. I greatly appreciate your response to this invitation within a week of having received it. Please feel free to contact me with further questions about the study or the informed consent form. Thank you for your consideration and for the important work you do.

With appreciation,

Sara Ogawa

2014 MA Candidate

Dance/Movement Therapy and Counseling

Columbia College Chicago

Sara.ogawa@loop.colum.edu

Appendix C: Informed Consent Form



Informed Consent Form

Consent Form for Participation in a Research Study

Title of Research Project: Looking at women's experience of infertility from dance/movement therapy perspective

Principal Investigator: Sara Ogawa sara.ogawa@loop.colum.edu / 312-545-0121

Faculty Advisor: Shannon Lengerich slengerich@colum.edu / 312-369-7697

Chair of Thesis Committee: Laura Downey ldowney@colum.edu / 312-369-7697

INTRODUCTION

You are invited to participate in a research study exploring women's infertility experiences and find possible needs for dance/movement therapy (DMT). This consent form will give you the information you will need to understand why this study is being done and why you are being invited to participate. It will also describe what you will need to do to participate and any known risks, inconveniences or discomforts that you may have while participating. You are encouraged to take some time to think this over. You are also encouraged to ask questions now and at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. This process is called 'informed consent.' You will receive a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of this research study is to understand the experience of infertility in order to assess needs of those who struggle with their fertility treatment process. The potential benefit of dance/movement therapy (DMT) will be explored once these needs are identified. Through this study, I hope to establish DMT interventions which will contribute to expansion of treatment option and integration of psychological support with medical treatment.

PROCEDURES

If you agree to participate in this study, you will be asked to do the following:

- Self-identify as individual who matches with following criteria:
Adult female who are over eighteen (there are no limitation on ethnicity)
Female individual who has been diagnosed with female infertility
Female individual who has **current or past** experiences receiving medical treatments for infertility.
Female individual whose own physical condition results her infertility
- Sign and send back this informed consent form to principle investigator (me) via mail or email with secure password attachment prior to schedule interview appointment.
- Schedule day and time to conduct individual interview with principle investigator and give at least 24 hours' notice if the scheduled interview needs to be cancelled
- Avoid cancelling the scheduled interview no more than one time
- Share your personal infertility experiences by participate in a videotaped 1-1.5 hour individual interview, which include verbal and movement components. Questions will ask inquire about your experiences in each phase of your treatment processes, such as pre-diagnosis phase, diagnosis phase, beginning of treatment phase, etc.. For each phase, you will be asked to create corresponding poses or gestures which represent how you feel remembering or talking about those experiences in the moment.
Interview will be conducted at Columbia College Chicago which can provide a safe and private setting. Specific schedule will be determined upon agreement between you and principle investigator (me).
- After your initial interview, you will be contacted again at a later stage of the study to review findings to examine accuracy of principle investigator's understanding about your experiences. This process is called member checking process. You will be invited to provide feedback, clarifications and/or additional information you feel is relevant.
- Grant permission for portions of your interview to be included in the final written presentation of the research. In addition, if you agree your interview to be possibly quoted, you will have choices of whether you prefer to identify yourself with actual name or pseudonym, or remain anonymous in the study.
 - **AGREE / DISAGREE (circle) your interview to be quoted in the writing.**
 - If you wish to be **identified with your actual name** put your initial here _____.
 - If you wish to **be identified with pseudonym**, please provide the name here _____.
 - If you wish to be **remain anonymous** in the study, check here _____.

You will also have a chance to make decision about this matter during the member checking process.

- Grant permission for portions of your movements to be utilized to create a choreographed dance piece as the final presentation (the dance piece will be performed by either myself or

professional dancers) The dance piece will be presented in the Student/Faculty Concert of the Department of Creative Arts Therapy.

- If you experience any emotional distress during this research process due to revealing sensitive personal experiences, you agree to engage in active self-care, such as gaining therapy or counseling support, outside of the research. This research process does not include personal therapy.

POSSIBLE RISKS OR DISCOMFORTS

- The potential risks in this study mainly include emotional or psychological responses due to re-counting past or present personal experiences. While asking you to share your past or current experience with infertility, positive or negative memories might be recalled as a result, which could essentially lead to re-living those experiences in the moment. The emotional or psychological responses to re-living the memories could emerge during the interview process or after the interview process. As a way of minimizing any emotional or psychological turmoil, you will be invited to openly acknowledge any feelings or thoughts that emerge during the interview process. Due to the potential of sensitive material emerging as a result of the interview process, it is ultimately your responsibility when maintaining individual safety by reaching out to resources outside of this study. As a result, you may discontinue the interview and further participation in the study at any time.

POSSIBLE BENEFITS

The possible benefits of being in this study include

- Contribution to the increased acknowledgement and understanding of infertility on individual, organizational, and societal levels.
- Contribution to expansion of possible treatment options and integration of psychological support with medical treatment.

CONFIDENTIALITY

Confidentiality means that the investigator will keep the names and other identifying information of the research participants private.

- In the writing, the researcher (I) will not include any information that could lead to the identification of you, nor will I use direct quotes unless you explicitly agree. You have choice to remain anonymous, be identified with a pseudonym, or be identified with actual name (see the procedure process for detail).
- In the process of creation and presentation of the final dance piece, I will ensure that dancers as well as an audience will not have access to any of your personal information. These dancers will learn choreograph from me, and they will not have access to original interview data nor interviewee's personal information.
- The principle investigator (me) will keep all study records locked in a secure location at my apartment room.

- Any personal communication between you (research participant) and I (researcher) will be retrieved in a private location, on my private computer. My private computer and e-mail will be protected through the use of a firewall, as well as an encrypted password.
- Personal communication through e-mail will be exchanged through my private e-mail account
- Any video tapes will be locked in a secure safety box at principle investigator's apartment, and they will be destroyed after five year(s).
- Personal study notes that I create may be kept indefinitely, however, any personal information identifying you as the participant will be permanently blacked out to ensure your confidentiality.
- All electronic files containing personal information will be password protected and retrieved in my personal computer which is also protected by password.
- Information about you that will be shared with others will be unnamed to help protect your identity.
- No one else beside myself (researcher) will have access to the original data.
- The interview data collected will only be transcribed by me, the primary investigator.
- The data will only be synthesized and analyzed by me, the primary investigator.
- All transcribed and analyzed data will be documented in word file with a password, and the file will be retrieved in my private computer which is also protected by password.
- You (participant) and I (researcher) will be the only individuals aware of location, dates and times for interviews.
- The interview will be conducted at the place in a secure, private and safe location.

RIGHTS

Being a research participant in this study is voluntary. You may choose to withdraw from the study at any time without penalty. You may also refuse to participate at any time without penalty.

I will be happy to answer any question(s) you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Sara Ogawa at 312-545-0121 or the faculty advisor Shannon Lengerich at 312-369-7697. If you have any questions concerning your rights as a research subject, you may contact the Columbia College Chicago Institutional Review Board staff (IRB) at 312-369-7384.

PARTICIPANT STATEMENT

This study has been explained to me. I volunteer to take part in this research. I have had opportunity to ask questions. If I have questions later about the research or my rights as a research participant, I can ask one of the contacts listed above. I understand that I may withdraw from the study or refuse to participate at any time without penalty. I will receive a copy of this consent form.”

Participant Signature

Print Name:

Date:

Principal Investigator's
Signature

Print Name:

Date

Appendix D: Demographics

	Age	Relationship Status	Number of children	Treatment Experiences			Current status of treatment	
				Fertility enhancing drug	IUI	IVF		others
A	36	Married	1	X	X	X	Successfully carried to term	
B	38	Married	0	X	X	X	Pregnant	
C	37	Married	0	X		X	Pregnant	
D	42	Married	1		X	X	Surrogate	Active (second child)
E	39	Separated	0		X	X	Egg freezing	Taking a break

Appendix E: Interview Script

Questions will be picked and altered based on participants experiences and what they want to share during interviews.

- Pre-diagnosis Phase

- How do you describe your pre-diagnosis phase of life?

- What does it look like in your body to reflect this phase of experience? Please show me what you are feeling now through gestures or poses. Please explain body sensations if you can feel any.

- Diagnosis Phase

- What was your experience like to be diagnosed as infertile?

- What did you think and feel about being diagnosed as infertile?

- What does it look like in your body to reflect this phase of experience? Please show me what you are feeling now through gestures or poses. Please explain body sensations if you can feel any.

- Treatment Phase

- How do you describe your experience of receiving medical treatments?

- What is/was the hardest part of the treatment process and why?

- What is/was the positive quality about the treatment process?

- Do you think you need/needed psychological support along with medical treatments? If yes, explain what kind support you may want/wanted and why. If no, explain why.

- What does it look like in your body to reflect this phase of experience? Please show me what you are feeling now through gestures or poses. Please explain body sensations if you can feel any.

➤ Following questions will be asked to participants who had past experiences of medical treatment processes.

- Termination Phase

- What made you decide to terminate the treatments?

- What was your internal process to make decision?

- What does it look like in your body to reflect this phase of experience? Please show me what you are feeling now through gestures or poses. Please explain body sensations if you can feel any.

➤ Overall question

- What is the most important thing that you want to share about your infertility experience?

Appendix F: Dancer's Consent Form

Contractual Obligation for the Dance Piece as a Final Presentation

I, _____, agree to perform in a piece choreographed by Sara Ogawa for the MOVED show at Hamlin Park Theater on Nov, 21st Friday.

I consider this contract as a commitment to be in a work for the show

Write the Initials to Agree as Follow:

_____ I understand that the dance piece is a part of this choreographer's final thesis presentation process, which aimed to express comprehensive experiences of women' infertility

_____ I understand my obligation to attend weekly rehearsals and the tech/dress rehearsals on Nov, 19th Wednesday and 21st Friday.

_____ I understand that I will not have access to any research data or information that can possibly reveal research participants' identification.

_____ I understand that this choreographic process may elicit emotional distress due to experiencing embodiment of sensitive topic. In order to maintain my mental health, I am obligated to gain emotional support, such as therapy or counseling services outside of this choreographic process as needed.

Thank you for your dedication and commitment to this project

Choreographer / Researcher: Sara Ogawa

Signature _____

Date _____